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Ontario Legislative Assembly

SESSIONAL PAPERS

VOL. L.—PART VIII.

FOURTH SESSION

OF THE

FOURTEENTH LEGISLATURE

OF THE

PROVINCE OF ONTARIO

(and 1 map to accompany Sess. Pprs. No. 49, 1918)

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SESSION 1918

TORONTO:
Printed and Published by A. T. WILGRESS, Printer to the King's Most Excellent Majesty
1918

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THE RYERSON PRESS

LIST OF SESSIONAL PAPERS

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No. 2 — Estimates—Supplementary, for service of the Province for the year ending 31st October, 1918. Presented to the Legislature, February 12th, 1918. *Printed.* Further Supplementary. Presented to the Legislature, February 27th, 1918. *Printed.* Estimates for the year ending 31st October, 1919. Presented to the Legislature, March 8th, 1918. *Printed.*

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No. 4 — Report of the Bureau of Mines for the year 1917. Presented to the Legislature, March 15th, 1918. *Printed.*

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No. 5 — Report of the Inspector of Division Courts for the year 1917. Presented to the Legislature, February 26th, 1918. *Printed.*

No. 6 — Report of the Inspector of Legal Offices for the year 1917. Presented to the Legislature, March 8th, 1918. *Printed.*

No. 7 — Report of the Inspector of Registry Offices for the year 1917. Presented to the Legislature, March 1st, 1918. *Printed.*

No. 8 — Report of the Provincial Municipal Auditor for the year 1917. Presented to the Legislature, March 21st, 1918. *Printed.*

No. 9 — Report of the Queen Victoria Niagara Falls Park Commission, for the year 1917. Presented to the Legislature, February 25th, 1918. *Printed.*

No. 10 — Report of the Inspector of Insurance for the year 1917. Presented to the Legislature, February 26th, 1918. *Printed.*

No. 11 Report of the Registrar of Friendly Societies for the year 1917. Presented to the Legislature, February 26th, 1918. *Printed.*

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No. 12 Loan Corporations—Financial Statements made by Building Societies, Loan Companies, Loaning, Land and Trust Companies, for the year 1917. Presented to the Legislature, February 26th, 1918. *Printed.*

No. 13 Report of the Minister of Public Works for the year 1917. Presented to the Legislature, February 26th, 1918. *Printed.*

No. 14 Report of the Department of Game and Fisheries for the year 1917. Presented to the Legislature, March 12th, 1918. *Printed.*

No. 15 Report on Highway Improvement for the year 1917. Presented to the Legislature, March 1st, 1918. *Printed.*

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No. 17 Report of the Minister of Education for the year 1917. Presented to the Legislature, March 7th, 1918. *Printed.*

No. 18 Report of the Board of Governors of the University of Toronto for the year 1917. Presented to the Legislature, February 6th, 1918. *Printed.*

No. 19 Report of the Secretary and Registrar of the Province for the year 1917. Presented to the Legislature, March 1st, 1918. *Printed.*

No. 20 Report of the Registrar General on Births, Marriages and Deaths for the year 1917. Presented to the Legislature, February 26th, 1918. *Printed.*

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No. 21 Report of the Provincial Board of Health for the year 1917. Presented to Legislature, February 20th, 1918. *Printed.*

No. 22 Report upon the Hospitals for the Insane for the year 1917. Presented to the Legislature, March 18th, 1918. *Printed.*

No. 23 Report upon the Hospitals for Idiots and Epileptics, at Orillia and Woodstock, for the year 1917. Presented to the Legislature, March 18th, 1918. *Printed.*

No. 24 Report upon the Feeble-minded, in Ontario, for the year 1917. *Printed. Part of No. 23.*

No. 25 Report upon Hospitals and Charitable Institutions of the Province for the year 1917. Presented to the Legislature, March 18th, 1918. *Printed.*

No. 26 Report upon the Common Gaols, Prisons and Reformatories of the Province for the year 1917. Presented to the Legislature, March 18th, 1918. *Printed.*

No. 27 Report upon the Neglected and Dependent Children of the Province for the year 1917. Presented to the Legislature, March 20th, 1918. *Printed.*

No. 28 Report on the operation of the Liquor License Acts in the Province for the year 1918. Presented to the Legislature, March 7th, 1918. *Printed.*

No. 29 Report of the Minister of Agriculture, for the year 1917. Presented to the Legislature, March 8th, 1918. *Printed.*

No. 30 Report of the Ontario Agricultural College and Experimental Farm for the year 1917. Presented to the Legislature, March 8th, 1918. *Printed.*

No. 31 Report of the Ontario Veterinary College for the year 1917. Presented to the Legislature, March 8th, 1918. *Not printed.*

No. 32 Report of the Ontario Agricultural and Experimental Union for the year 1917. Presented to the Legislature, March 8th, 1918. *Printed.*

No. 33 Report of the Stallion Enrolment Board for the year 1917. Presented to the Legislature, March 8th, 1918. *Printed.*

No. 34 Report of the Ontario Vegetable Growers' Association for the year 1917. Presented to the Legislature, March 8th, 1918. *Printed.*

No. 35 Report of the Ontario Corn Growers' Association for the year 1917. Presented to the Legislature, March 8th, 1918. *Printed.*

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No. 36 Report of the Entomological Society of Ontario for the year 1917. Presented to the Legislature, March 8th, 1918. *Printed.*

No. 37 Report of the Bee-Keepers' Association of Ontario for the year 1917. Presented to the Legislature, March 8th, 1918. *Printed.*

No. 38 Report of the Dairymen's Association of Ontario for the year 1917. Presented to the Legislature, March 28th, 1918. *Printed.*

No. 39 Report of the Live Stock Association of Ontario for the year 1917. Presented to the Legislature, March 11th, 1918. *Printed.*

No. 40 Report of the Farmers' Institutes of Ontario for the year 1917. *Dropped.*

No. 41 Report of the Women's Institutes of Ontario for the year 1917. Presented to the Legislature, March 11th, 1918. *Printed.*

No. 42 Report of the Agricultural Societies of Ontario for the year 1917. Presented to the Legislature, March 8th, 1918. *Printed.*

No. 43 Report of the Horticultural Societies of Ontario for the year 1917. Presented to the Legislature, March 8th, 1918. *Printed.*

No. 44 Report of the Fruit Growers' Association of Ontario for the year 1917. Presented to the Legislature, March 8th, 1918. *Printed.*

No. 45 Report of the Vineland Horticultural Experiment Station for the year 1917. Presented to the Legislature, March 8th, 1918. *Printed.*

No. 46 Report of the Bureau of Industries of the Province for the year 1917. Presented to the Legislature, March 8th, 1918. *Printed.*

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No. 47 Report of the Factories Inspectors of the Province for the year 1917. Not presented. *Printed. Part of No. 16.*

No. 48 Report of the Temiskaming and Northern Ontario Railway Commission for the year 1917. Presented to the Legislature, March 20th, 1918. *Printed.*

No. 49 Report of the Hydro-Electric Power Commission for the year 1917. Presented to the Legislature, March 20th, 1918. *Printed.*

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No. 50 Report of the Ontario Railway and Municipal Board for the year 1917. Presented to the Legislature, March 11th, 1918. *Printed.*

No. 51 Memorandum *re* Elections—Presented to the Legislature, February 5th, 1918. *Not printed.*

No. 52 Report of the Provincial Archivist for the year 1917. Presented to the Legislature, March 1st, 1918. *Printed.*

No. 53 Report of the Librarian on the State of the Library. Presented to the Legislature, February 7th, 1918. *Not printed.*

No. 54 Report of the Provincial Auditor for the year 1917. Presented to the Legislature, February 21st, 1918. *Printed.*

No. 55 Report of the Ontario Workmen's Compensation Board for the year 1917. Presented to the Legislature, March 21st, 1918. *Printed.*

No. 56 Report of Commissioner Coatsworth *re* Industrial Farm investigation at Burwash, Ontario. Presented to the Legislature, February 6th, 1918. *Not printed.*

No. 57 Report and supporting statements on Medical Education in Ontario, by Mr. Justice Hodgins, Commissioner. Presented to the Legislature, February 6th, 1918. *Printed.*

No. 58 Return to an Address to His Honour the Lieutenant-Governor, of the 20th March, 1917, praying that he will cause to be laid before the House—1. Copies of all Orders-in-Council approving of the agreement for the construction of the Hydro Radial Line from Toronto to Niagara Falls through Hamilton. 2. Copies of all reports, engineers' and otherwise, in reference to the cost and prospective earnings of the said railway furnished by the Hydro-Electric Power Commission to the Government. 3. Copies of all correspondence passing between the Hydro-Electric Power Commission and the Government in reference to the passing of the said Orders-in-Council and the construction of the said line. Mr. *Marshall.* Presented to the Legislature, February 6th, 1918. *Not printed.*

No. 59 Return to an Order of the House of the 26th March, 1917, for a Return shewing:—1. How many leases of water-powers were issued by the Ontario Government in each of the years 1912, 1913, 1914, 1915, 1916 and down to March 1st, 1917. 2. To whom, in what districts, and for what periods of time were such leases of water-powers issued. Mr. *Dewart.* Presented to the Legislature, February 6th, 1918. *Not printed.*

No. 60 Return to an Order of the House of the 7th March, 1917, for a Return shewing:—1. What areas of land of the Government of the Province of Ontario in Forest Reserve sections were overrun by fire in the years 1910, 1911, 1912, 1913, 1914, 1915 and 1916 respectively. Mr. *Ducharme.* Presented to the Legislature, February 6th, 1918. *Not printed.*

No. 61 Return to an Order of the House of the 7th March, 1917, for a Return shewing:—1. How many patents of lands have been issued, under the Mines Act, in the District of Sudbury, to corporations, since February 8, 1905, in addition to the six patents of land issued to the Canada Copper Company on the 13th day of December, 1916. 2. To what corporations were such patents issued; on what dates; and in what townships were the lands situated. 3. Were the regulations with regard to timber preservation taken advantage of by those who staked claims, and were they so relieved from doing the necessary

development work required by the Mining Law of Ontario. If so, in what cases. Mr. *Dewart.* Presented to the Legislature, February 6th, 1918. *Not printed.*

No. 62 Return to an Order of the House of the 23rd February, 1917, for a Return of Copies—1. All correspondence passing between the Government of Ontario, or any member, officer, or official thereof, and the Ontario Hydro-Electric Power Commission or any officer or official thereof, in reference to the purchase or acquirement of the properties of the Seymour Power Company. 2. All reports made by the Hydro-Electric Power Commission, or any member, officer or official thereof, in reference to the purchase of the properties of the said Seymour Power Company. 3. All valuations made by or on behalf of the Hydro-Electric Power Commission of the properties of the said Seymour Power Company. 4. All correspondence between the Government of the Province of Ontario, or any member, officer, or official thereof, and the Government of the Dominion of Canada, or any officer, or official thereof, in reference to the purchase or acquirement of the properties of the Seymour Power Company. Mr. *Carter.* Presented to the Legislature, February 6th, 1918. *Not printed.*

No. 63 Return to an Order of the House of the 16th March, 1917, for a Return shewing:—1. What was the population of Ontario for each of the years from the year 1900 to 1916 inclusive. 2. What was the public debt of the Province of Ontario from the year 1900 to the year 1916 inclusive. 3. What was the public debt *per capita* for each of the years from the year 1900 to the year 1916 inclusive. Mr. *Pinard.* Presented to the Legislature, February 6th, 1918. *Not printed.*

No. 64 Return to an Order of the House of the 14th March, 1917, for a Return of copies of all documents and correspondence passing between the Workmen's Compensation Board or any member, officer or employee thereof; the personal representatives of Archibald Taylor (deceased), late of Sarnia, Ont., or any person or persons acting on their behalf, and the Grand Trunk Railway Company or any employee or officer thereof. Mr. *Elliott.* Presented to the Legislature, February 6th, 1918. *Not printed.*

No. 65 Return to an Order of the House of the 5th March, 1917, for a Return of—1. Copies of all correspondence, reports and documents in any way relating to the attempted arrest of one John W. Moyes. 2. What steps have been taken to effect such arrest and if it is the intention of the Government to continue its efforts to bring about the arrest of the said John W. Moyes. Mr. *Proudfoot.* Presented to the Legislature, February 6th, 1918. *Not printed.*

No. 66 Copies of Regulations and Orders-in-Council as required by Section 27 of the Department of Education Act. Presented to the Legislature, February 13th, 1918. *Not printed.*

No. 67 Statement *re* distribution of Revised and Sessional Statutes for the year 1917. Presented to the Legislature, February 20th, 1918. *Not printed.*

No. 68 Copies of Orders-in-Council in accordance with the provisions of ss. 6 of section 78 of the Surrogate Courts Act. Presented to the Legislature, February 26th and March 21st, 1918. *Not printed.*

No. 69 Return to an Order of the House, of the 25th February, 1918, for a Return shewing—1. What lands, if any, have been patented in the District of Sudbury, in the year 1917, to the following persons, respectively, Albert Harvey, Rinaldo McConnell, Alex. H. Beath and R. J. Tough. 2. On what dates were the said lands, if any, patented. 3. Have any terms been imposed in the Patents granted for any such lands so as to insure the treatment and refining of the Nickel Ores mined upon these properties in the Province of Ontario. 4. Is there any agreement or obligation on the part of the Company in question to which any such lands have been granted, which obligates them to carry on mining or other obligations, in the Province of Ontario, and if so what are the agreements or obligations and within what time limit must they be performed. Mr. *Dewart.* Presented to the Legislature, February 26th, 1918. *Not printed.*

No. 70 Contract of Agreement made with the Mounce Cartage Company, Limited, relating to the delivery of mail matter to and from the Toronto Post Office and the Parliament Buildings. Presented to the Legislature, February 27th, 1918. *Not printed.*

No. 71 Return to an Order of the House of the 26th February, 1918, for a Return shewing—1. What lands in the District of Sudbury, if any, have been granted to "John E. Hodge," of Minneapolis, Minn., in the U.S.A., since the 1st of March, 1917. 2. Is the said "John E. Hodge" connected with or representing any corporate interests, to the knowledge of the Government, and if so, what is the name of the corporation, and who are its officers. 3. Have any terms been imposed in such patents as have been granted, so as to ensure the treatment and the refining of the nickel ores mined upon this property in the Province of Ontario. 4. Is there any agreement, or obligation on the part of the grantees in question, obligating them to carry on mining or other operations in the Province of Ontario, and if so what are the agreements and obligations, and within what time limit must they be performed. Mr. *Dewart.* Presented to the Legislature, March 1st, 1918. *Not printed.*

No. 72 Return to an Order of the House of the 26th February, 1918, for a Return shewing—1. What lands, if any, have been patented in the District of Sudbury to "Sudbury Nickel, Limited," in the year 1917, and on what dates. 2. When was this company incorporated, with what share capital, and with what provisional directors. 3. What stock of the company has been issued (*a*) for cash; (*b*) for transfer of properties or claims, and to whom. 4. Who are the present directors of the company. 5. Have any terms been imposed in the patents granted for any such lands, so as to ensure the treatment and refining of the nickel ores mined upon any such properties in the Province of Ontario. 6. Is there any agreement or obligation on the part of the company in question to whom any such lands have been granted, which obligates them to carry on mining or other operations in the Province of Ontario, and if so what are the agreements or obligations, and within what time limit must they be performed. Mr. *Dewart.* Presented to the Legislature, March 1st, 1918. *Not printed.*

No. 73 Return to an Order of the House of the 26th February, 1918, for a Return shewing—1. What lands, if any, have been patented to the Canadian Copper Company in 1917, and at what dates. 2. Has the Government attached any restrictions to the patents granted to the said company, or taken any steps to ensure that the nickel recovered from the properties so granted shall be refined or otherwise treated in the Province of Ontario. Mr. *Dewart.* Presented to the Legislature, March 1st, 1918. *Not printed.*

No. 74 Interim Report on Venereal Diseases, with copy of an Act for the Prevention of Venereal Disease, by Mr. Justice Hodgins, Commissioner. Presented to the Legislature, March 5th, 1918. *Printed.*

No. 75 Return to an Order of the House of the 7th March, 1918, for a Return shewing—1. Copies of all correspondence between the Minister of Public Works, or any other members of the Government, or any official thereof, and any person or persons, and copies of any reports received by the Government, relating to the floods on the Grand River, since the return brought down by the House on the 3rd of April, 1913, being a preliminary study of the subject by H. G. Acres of the Hydro-Electric Power Commission. Mr. *Ham.* Presented to the Legislature, March 8th, 1918. *Not printed.*

No. 76 Return to an Order of the House of 25th February, 1918, for a Return shewing—1. What was the amount paid in by each of the following corporations in the year 1917, or the last period of twelve months for which returns are made, for all purposes under the Workmen's Compensation Act, namely: Massey-

Harris Co., Ltd., John Inglis Co., Ltd., Toronto Carpet Mfg Co., Harris Abattoir Co., Ltd., Park, Blackwell Co., Ltd., Dominion Radiator Co., Ltd. 2 What amount was paid out in the same period under the Act to the employees of each of the said companies, for claims made for injuries during the said period. 3. What amount, if any, was held, under the Act, for further payments on claims made in the same period for injuries by such employees of each of the said companies. Mr. *Dewart.* Presented to the Legislature, March 11th, 1918. *Not printed.*

No. 77 Return to an Order of the House of the 27th February, 1918, for a Return shewing—1. Copies of all correspondence between the Government, or any officer or official thereof, and any person or persons, in reference to the purchase of additional land and the erection of buildings thereon, and all items in connection therewith, referred to in Vote No. 156, relating to the Hospital for the Insane, Kingston, appearing on Page 35 of the Supplementary Estimates for the Fiscal Year ending October 31st, 1918. Mr. *Dewart.* Presented to the Legislature, March 11th, 1918. *Not printed.*

No. 78 Memorandum on the Natural Gas Situation in Kent, Essex and Lambton. Presented to the Legislature, March 15th, 1918. *Printed.*

No. 79 Report on the Ontario Parole Board for the year 1916-17. Presented to the Legislature, March 20th, 1918. *Printed.*

No. 80 Budget Speech of the Provincial Treasurer, delivered in the House on the 12th February, 1918. *Not presented. Printed.*

No. 81 Telephone Systems—Statistical information and Acts relating to. *Not presented. Printed.*

No. 82 Report of Bureau of Municipal Affairs for the year 1917. Presented to the Legislature, March 21st, 1918. *Not printed.*

No. 83 Order-in-Council of 21st March, 1918, designating the Hospitals, Refuges, Orphanages and Infants' Homes, to which aid may be granted under the Hospitals and Charitable Institutions Act. Presented to the Legislature, March 21st, 1918. *Not printed.*

No. 84 Return to an Order of the House of the 7th March, 1917, for a Return shewing—1. What was the number and kind of pelts or skins of fur-bearing animals coming into the possession of the Government of the Province of Ontario during the years 1910, 1911, 1912, 1913, 1914, 1915, and 1916, respectively, because of violation of any law or laws relating to fur-bearing animals. 2. What disposition of such pelts or skins has been made by the Government. 3. And what price or prices for

each kind of fur, and to whom have the aforesaid pelts or skins been disposed of by the Government. Mr. *Ferguson* (Kent). Presented to the Legislature, March 21st, 1918. *Not printed.*

No. 85 Report of the Soldiers' Aid Commission of Ontario for the year 1917. Presented to the Legislature, March 21st, 1918. *Not printed.*

No. 86 Return to an Order of the House of the 6th March, 1918, for a Return shewing—1. How many civil servants were released during the past year for work on Ontario farms. 2. What are the names of such employees. 3. How long were they so employed. 4. What are the names of the parties by whom they were employed. Mr. *Ham.* Presented to the Legislature, March 21st, 1918. *Not printed.*

No. 87 Return to an Order of the House of the 20th March, 1918, for a Return shewing—1 (*a*) How many copies of the Report relating to the registration of births, marriages and deaths in the province for the year 1916, were published. (*b*) How many were distributed. 2. What was the cost of printing and publication. 3 (*a*) How much would the cost have been reduced if the Report had been confined to the first 57 pages. (*b*) How much, if confined to the first 154 pages. 4. How many officials and clerks were employed in the preparation of the copy of the said Report for the printer, and for what approximate time and at what estimated cost. Mr. *Dewart.* Presented to the Legislature, March 21st, 1918. *Not printed.*

Reaping Oats on farm of Mr. J. R. Philips, Milberta, Ontario, September, 1917.

SIXTEENTH ANNUAL REPORT

OF THE

Temiskaming and Northern Ontario Railway Commission

ONTARIO GOVERNMENT RAILWAY

SIR WILLIAM H. HEARST, PREMIER

For Year Ended October 31st

1917

PRINTED BY ORDER OF

THE LEGISLATIVE ASSEMBLY OF ONTARIO

TORONTO:

Printed and Published by A. T. WILGRESS, Printer to the King's Most Excellent Majesty

1918

Printed by
WILLIAM BRIGGS
Corner Queen and John Streets
TORONTO

To His Honour Sir John Strathearn Hendrie, C.V.O., a Lieutenant-Colonel in the Militia of Canada,

Lieutenant-Governor of the Province of Ontario.

May it Please Your Honour:

The undersigned has the honour to present to your Honour the Sixteenth Annual Report of the Temiskaming and Northern Ontario Railway Commission for the fiscal year ended October 31st 1917.

Respectfully submitted.

F. G. MACDIARMID,

Minister of Public Works and Highways.

Department of Public Works, Ontario.

Hon. Findlay Macdiarmid,

Minister of Public Works and Highways,

Toronto.

Sir,—I have the honour, by direction, to submit to the Legislature the Sixteenth Annual Report of the Temiskaming and Northern Ontario Railway Commission for the fiscal year ended October 31st, 1917.

I have the honour to be, Sir,

Your obedient servant,

W. H. Maund,

Secretary-Treasurer.

Temiskaming and Northern Ontario Railway Commission.

J. L. Englehart	*Chairman*	Petrolia.
Denis Murphy	*Commissioner*	Ottawa.
Geo. W. Lee	*Commissioner and General Agent*	North Bay.

CHIEF OFFICERS.

W. H. Maund	*Secretary-Treasurer*	Toronto.
S. B. Clement	*Chief Engineer and Supt. of Maintenance*	North Bay.
W. A. Griffin	*Superintendent of Traffic*	North Bay.
T. J. Gracey	*Auditor of Disbursements and Accountant*	Toronto.
A. J. Parr	*General Freight and Passenger Agent*	North Bay.
W. A. Graham	*Purchasing Agent and Storekeeper*	North Bay.
H. W. Teskey	*Auditor of Receipts and Claims and Car Accountant*	North Bay.
C. L. Ferguson	*Paymaster*	North Bay.
T. Ross	*Master Mechanic*	North Bay.
H. L. Rodgers	*Mechanical Engineer*	North Bay.
C. Battley	*Air-Brake Inspector*	North Bay.
R. L. Lamb	*Chief Train Despatcher*	North Bay.
Wm. Young	*Roadmaster—District No. 1*	North Bay.
S. J. Faught, Sen.	*Assistant Roadmaster—District No. 1*	North Bay.
J. Drinkwater	*Roadmaster—District No. 2*	Cochrane.
Adam Edwards	*Assistant Roadmaster—District No. 2*	Cochrane.
W. J. Oldham	*Bridge and Building Master*	North Bay.
J. J. Douglass	*Road Foreman, Locomotives*	North Bay.
W. J. Kelly	*Supt. Telegraphs and Telephones*	North Bay.
Arthur A. Cole	*Mining Engineer*	Cobalt.
J. G. G. Kerry	*Consulting Engineer*	Toronto.

TEMISKAMING AND NORTHERN ONTARIO RAILWAY COMMISSION.

General Remarks.

Accounts and statistics for fiscal year ending October 31st, 1917, herewith:—

MILEAGE IN OPERATION ON OCTOBER 31ST, 1917.

	Miles.	Miles.
Main Line—		
North Bay to Cochrane	252.29	252.29
Branch Lines—		
Charlton Branch	7.60	
Porcupine (includes Iroquois Falls Branch)	40.11	
Elk Lake Branch	28.50	
		76.21
Nipissing Junction Spur (leased to Grand Trunk Ry.)	.....	2.10
Yards and Sidings—		
Yards and Sidings—main line and branches	112.93	
Liskeard Spur	1.12	
		114.05
Double Track—North Cobalt to Haileybury	.....	1.70
Subsidiary Lines—		
Nipissing Central Railway	13.13	13.13
Total mileage	.....	459.48

Following is a condensed statement of revenue account for fiscal year ended October 31st, 1917, compared with 1915 and 1916. The sub-divisions of the condensed statement for 1917 are shown in full detail in the financial report.

	1915	1916	1917
	$ c.	$ c.	$ c.
Revenue from transportation	1,483,923 07	2,045,498 23	2,220,892 22
Revenue other than transportation	66,480 26	92,623 72	111,013 57
Total operating revenue	1,550,403 33	2,138,121 95	2,331,905 79
Operating expenses	1,356,049 87	1,594,177 46	1,881,296 29
Net operating revenue	194,353 46	543,944 49	450,609 50
Ore royalties	26,268 74	49,877 62	119,576 04
Rent from joint facilities	13,815 26	18,620 45	12,849 94
Rent from lease of road	16,601 37	13,347 04	13,624 15
Interest	.....	1,736 36	Dr. 5,649 48
Miscellaneous income	2,857 98	1,029 78	9,417 21
	253,896 81	628,555 74	600,427 36
Deductions from income	43,358 18	99,850 28	83,726 80
Net earnings	210,538 63	528,705 46	516,700 56

Operating expenses amount to 80.7 per cent. of gross earnings and the net earnings to 19.3 per cent., as compared with 74.6 per cent. and 25.4 per cent. respectively for the twelve (12) months ended October 31st, 1916, and 85.6 per cent. and 14.4 per cent. for the twelve (12) months ended October 31st, 1915. Earnings and expenses relating to Nipissing Central Railway are not contained in above figures, but are shown in separate statement on page 411 of this report.

The various statements contained in the financial report, fully itemized will show:—

From November 1st to October 31st.

——	1915	1916	1917
	$ c.	$ c.	$ c.
Revenue per mile of road	4,719 64	6,508 74	7,098 65
Expenditure per mile of road	4,128 00	5,173 27	6,001 93
Net revenue per mile of road	591 64	1,335 47	1,096 72
Miles operated	328.5	328.5	328.5

A decrease of $238.75 in net revenue per mile of road as compared with 1916 and an increase of $505.08 over 1915.

RECEIPTS.

——	1915	1916	1917
	$ c.	$ c.	$ c.
Revenue from transportation	1,483.923 07	2,048,498 23	2,220,892 22
Revenue other than transportation	66,480 26	92,623 72	111,013 57
Total	1,550.403 33	2,138.121 95	2,331,905 79
Increase over 1916		193.783 84— 9%	
" " 1915		781,502 46— 50.4 %	

EXPENDITURES.

From November 1st to October 31st, 1917.

——	%	1915	%		%	1917
		$ c.		$ c.		$ c.
Maintenance W. & S.	21.5	333,686 06	16.3	349.024 48	18.	419,266 84
" Equipment	17.5	271,335 10	11.6	248.702 94	13.1	305,268 86
Traffic expenses	1.2	18,320 66	1.1	22.465 69	.8	17,676 10
Transportation expenses	40.9	634,160 64	39.4	842,058 75	42.3	985,452 19
Miscellaneous operations	1.9	28,701 40	2.	42,562 89	2.	47,824 69
General expenses	4.6	70,994 15	4.3	91,317 74	4.6	107,255 05
Transportation for investment Cr.	.1	1,148 44	1.	1,954 13	.1	1.465 44
	87.5	1,356,049 57	74.6	1,594.177 46	80.7	1,881,296 29
Balance	.....	194,353 46	.....	543.944 49	.....	450,609 50

Maintenance of Way.

Renewal of rails, ties, ballast, etc., is fully set forth in the report of Chief Engineer and Superintendent of Maintenance. The following shows distribution of the sums expended under these headings for 1917, comparative with years 1916 and 1915:—

——	1915	1916	1917
	$ c.	$ c.	$ c.
Ballast	3,659 33	5,935 63	1,189 02
Ties	28,845 05	32,643 42	24,932 46
Rails	8,725 46	4,732 84	24,802 61
Track materials, frogs, switches, etc	7,990 63	12,817 12	22,347 48
Roadway materials and track repairs	166,392 62	176,661 89	174,342 32
Removal snow and ice	15,022 37	36,473 71	40,477 71
Bridges, trestles and culverts	30,421 75	9,099 40	10,858 91
Crossings, fences and signs	5,429 50	3,322 63	4,970 28
Telegraph and telephones, railway	3,283 81	5,681 91	4,545 30
Buildings, fixtures and grounds	28,238 13	29,670 93	80,314 60
Roadway tools and supplies	4,756 17	3,868 46	4,705 63
Miscellaneous expenses	30,921 24	28,116 54	25,780 52
Totals	333,686 06	349,024 48	419,266 84

Maintenance of Equipment.

The equipment has been maintained as heretofore to the highest standard of efficiency. In addition to maintenance statement below, there is shown a charge of $51,346.77 which has been added to reserve fund to cover depreciation on rolling stock and a charge of $13,511.28 to provide for the renewal of cars and work equipment retired or destroyed.

EQUIPMENT REPAIRS.

From November 1st to October 31st.

——	1915	1916	1917
	$ c.	$ c.	$ c.
Locomotives—repairs	86,269 58	93,935 90	121,216 07
Passenger-train cars—repairs	47,890 37	61,449 35	52,586 18
Freight " "	16,208 51	34,778 69	5,383 46
Work equipment "	53,658 55	Cr. 8,876 79	34,807 03
Total	204,027 01	181,287 15	213,992 74

DEPRECIATION.

——	1915	1916	1917
	$ c.	$ c.	$ c.
Locomotives—depreciation	14,845 56	15,034 59	19,008 09
Passenger train cars—depreciation	14,040 84	13,373 40	15,022 44
Freight train cars "	12,327 36	12,462 60	12,436 92
Work equipment "	3,337 44	4,060 92	4,879 32
Total	44,551 20	44,931 51	51,346 77

RETIREMENT.

—	1915	1916	1917
	$ c.	$ c.	$ c.
Locomotive—retirement			
Passenger train cars—retirement			2,195 20
Freight train cars "		418 72	9,896 08
Work equipment "			1,420 00
Total		418 72	13,511 28

SUMMARY.

—	1915	1916	1917
	$ c.	$ c.	$ c.
Equipment repairs	204,027 01	181,287 15	213,992 74
" depreciation	44,551 20	44,931 51	51,346 77
" retirement		418 72	13,511 28
Total	248,578 21	226,637 38	278,850 79

Total for years 1915, 1916, 1917, $754,066.38.

Comparison of Earnings and Expenses for Twelve Months—Fiscal Years, 1916-1917.

Earnings.	1917.		1916.	
	$ c.	%	$ c.	%
Transportation.				
Freight	1,459,459 93	65.7	1,320,569 33	64.6
Passenger	655,127 58	29.5	624,808 12	30.6
Mails and Express	89,503 56	4	82,418 30	4
Switching	10,199 07	.5	11,044 98	.6
Miscellaneous	6,602 08	.3	6,657 50	.2
	2,220,892 22	100	2,045,498 23	100
Incidentals.				
Station privileges	6,349 98	5.8	4,350 02	4.7
Storage	1,917 90	1.7	1,877 06	2
Demurrage	21,126 75	19	9,694 60	10.4
Telegraph and Telephones	60,267 50	54.3	56,797 76	61.3
Dining and Buffet	12,163 66	10.9	12,363 45	13.3
Rents—Miscellaneous	9,869 25	8.9	8,230 07	8
Joint Facility Dr.	681 47	.6	689 24	1
	111,013 57	100	92,623 72	100
Other Income.				
Ore Royalties	119,576 04	79	49,877 62	59
Rent, Joint Facilities	12,849 94	8.5	14,817 45	17.6
Rent, Lease of Road	13,624 15	9.	13,347 04	16
Rental, Locomotives	8,255 06	5.5	3,229 32	4
Rental, Work Equipment	1,162 15	.6	977 38	1.4
Miscellaneous Income	2,345 08	1.	1,029 78	4
Interest Dr.	5,649 48	3.6	1,736 36	8
	152,162 94	100	85,014 95	100
Gross Earnings, all sources	2,484,068 73		2,223,136 90	
Deductions from Income.				
Hire of Freight Cars Dr.	85,210 99	99	87,101 58	87
Rent of Passenger Cars Dr.	860 89	1	13,152 40	13
	86,071 88	100	100,253 98	100
Net Result	2,397,996 85		2,122,882 92	

Summary of Earnings.	Decrease.		Increase.	
	$ c.	%	$ c.	%
Transportation.				
Freight			138,890 60	10.5
Passenger			30,319 46	5
Mails, Express			7,085 26	8.6
Switching	845 91	8		
Miscellaneous	55 42	1		
	901 33		176.295 32	
(a) Transportation, net increase 1917			175,393 99	8.5
Incidentals.				
Station Privileges			1,999 96	46
Storage			40 84	
Demurrage			11,432 15	
Telegraph and Telephones			3,469 74	
Dining, Buffet	199 79			
Rents, Miscellaneous			1,639 18	
Joint Facilities .....Dr.			7 77	
	199 79		18,589 64	
(b) Incidentals, net increase 1917			18,389 85	20
Other Income.				
Ore Royalties			69.698 42	
Rental, Joint Facilities	1,967 51			
Rent, Lease of Road			277 11	
Rental, Locomotives			5.025 74	
Rental, Work Equipment			184 77	
Miscellaneous, Income			1,315 30	
Interest	7,385 84			
	9,353 35		76,501 34	
(c) Other Income net increase 1917			67,147 99	80
Gross Earnings, net increase 1917			260,931 82	11.8

ANALYSIS OF EARNINGS.—During comparative period under consideration accounts under head of Transportation increased in 1917 by (a) $175,393.99 or 8.5 per cent., Incidentals increased (b) $18,389.85 or 20 per cent. and Other Income increased by (c) $67,147.99 or 80 per cent. These accounts aggregate an increase in 1917 of $260,931.82 or 11.8 per cent. over 1916.

Expenditures.	1917.		1916.	
	$ c.	%	$ c.	%
Maintenance of W. & S.	419,266 84	18	349,024 48	16.3
" Equipment	305,286 86	13.1	248,702 04	11.6
Traffic	17,676 10	.8	22,465 69	1.1
Transportation	985,452 19	42.3	842,058 75	39.4
Miscellaneous Operations	47,824 69	2	42,562 89	2
General	107,255 05	4.6	91,317 74	4.3
Transportation for Investment.Cr.	1,465 44	.1	1,954 13	.1
	1,881,296 29	80.7	1,594,177 46	74.6
Deductions from Income.				
Hire of Freight Cars .....Dr.	85,210 99	.....	87,101 58	.....
Rent of Passenger Cars ....Dr.	860 89	.....	13,152 40	.....
	86,071 88	.....	100,253 98	.....
Result.				
Gross Earnings, all sources	2,484,068 73	.....	2,223,136 90	.....
Gross Expenditures and Deductions from Income	1,967,368 17	79.2	1,694,431 44	76.4
	516,700 56	20.8	528,705 46	23.6

Summary of Expenditures.	Increase.		Decrease.	
	$ c.	%	$ c.	%
Maintenance of W. & S.	70,242 36	20	.....	.....
" Equipment	56,584 82	22.8	.....	.....
Traffic	.....	.....	4,789 59	20
Transportation	143,393 44	17	.....	.....
Miscellaneous Operations	5,261 80	12.7	.....	.....
General	15,937 31	17.4	.....	.....
Transportation for Investment.Cr.	.....	.....	488 69	25
	291,419 73	.....	4,300 90	.....
Gross Expenditure, increase 1917	287,118 83	18	.....	.....
Deductions from Income.				
Hire of Freight Cars	.....	.....	1,890 59	2
Rent of Passenger Cars	.....	.....	12,291 51	94
	.....	.....	14,182 10	.....
Deductions from Income, decrease	.....	.....	14,182 10	14

Analysis of Expenditures.

During comparative period under consideration, accounts under head of "Expenditures" increased $287,118.83 or 18 per cent., and "Deductions from Income" decreased $14,182.10 or 14 per cent., or a net increase in operating cost of $272,936.73 or 16 per cent.

Digest.

The above statement relating to comparison of Earnings and Expenditures for Fiscal Year 1917, discloses that the earnings in transportation were exceedingly good—showing a net increase of (*a*) $175,393.99 or 8.5 per cent. over preceding fiscal year.

The various Revenue Accounts under "Incidentals" increased by (*b*) $18,389.85 or 20 per cent., and "Other Income" produced an increase of (*c*) $67,147.99 or 80 per cent.

Therefore, the general advance in earning increase is derived as follows:—

(*a*) Transportation	$175,393 99	—	8.5%
(*b*) Incidentals	18,389 85	—	20
(*c*) Other income	67,147 99	—	80
Gross Revenue Increase	$260,931 83	—	11.8%

(*d*) The expenditure increases in connection with operation, however, more than offset the general revenue increases—the various accounts under this heading resulting in an increase of $287,118.83 or 18 per cent. for the period. Therefore, the increased transportation earnings of (a) $175,393.99 were exceeded in increased cost of operation by $111,724.84 or 67 per cent.

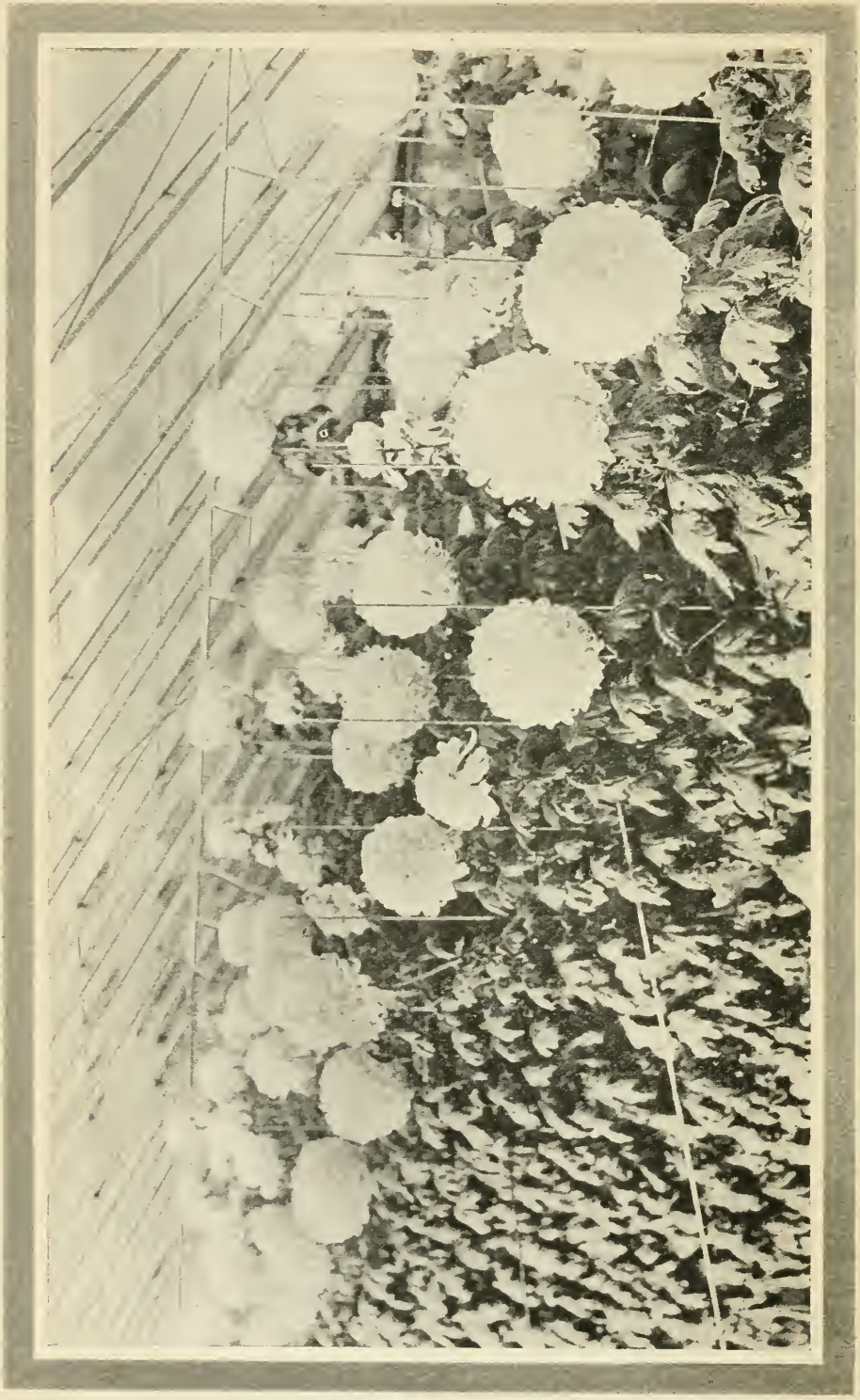
(*e*) Deductions from income, however, decreased $14,182.10 or 14 per cent. during the comparative period, and this, combined with the increased earnings under (*b*) "Incidentals" $18,389.85 and (*c*) "Other Income" $67,147.99, make a total of $99,719.94 to apply against the excess operation cost, leaving a debit balance of $12,004.90 for period.

Therefore, though the gross earnings of fiscal year 1917 increased by $275,113.93 or 12 per cent., the expenses of operation increased $287,118.83 or 18 per cent., nullifying the advanced earnings and leaving a decrease in the year's operations of $12,004.90 as compared with 1916. This defect would have been much larger and of a nature to seriously affect the net earnings if Ore Royalties had not produced an increased earning of $69,698.42 for 1917.

CONDENSED STATEMENT, CHARGES TO CONSTRUCTION, YEARS 1915, 1916 AND 1917.

During fiscal year 1917 there have been expended the amounts in following statement under above heading. For comparative purposes fiscal years 1915 and 1916 are also shown.

	1917	1916	1915
	$ c.	$ c.	$ c.
New Buildings, improvements, etc	34,501 72	76,811 74	49,185 54
Additional shop machinery	31,545 64	2,413 44	3,403 95
Bridges, trestles and culverts—betterments	17,669 80	27,946 10	31,922 15
New fencing and road crossings	1,731 32	6,746 05	7,032 08
Roadbed, underdrainage and widening embankments	.....	889 21	9,364 37
Increased weight of rail and improved fastenings	8,606 43	1,881 45	6,424 78
Telegraph and telephone lines	1,004 86	8,255 51	2,633 82
Grade and line revisions	45,179 04	13,443 89	.....
Increased yard facilities and miscellaneous sidings	27,903 82	71,406 55	37,715 42
Completion grading, etc., Porcupine, Iroquois Falls Sub-Division	.....	.....	14,155 55
Steam locomotives—additional Cr.	457 60	205,580 09	.....
" " —improvements	.....	.....	6,000 00
Passenger cars —additional	.....	77,500 58	.....
" —improvements	5,984 34	4,952 46	1,393 27
" —retirements Cr.	10,127 50	.....	.....
Freight cars —additional	24,182 01	31 85	6,763 28
" —retirements Cr.	23,711 17	Cr. 1,321 18	.....
Work equipment —additional	.....	40,923 03	1,407 06
" —retirements Cr.	2,750 00	.....	.....
Extra lands—less sales Cr.	8 20	5,520 65	4,809 17
	161,254 51	542,981 42	182,210 44



Chrysanthemums grown at Englehart, Ontario, 1917.

General.

For year under review as compared with 1915 and 1916, the percentages of operating expenses to operating revenue are as follows:—

1917	80.7%
1916	74.6
1915	87.5

Balance brought down from result of operation for year:—

1917	$450,609 50
1916	543,944 49
1915	194,353 46

Above comparative results show that 1917 decreased $93,334.99 as compared with 1916 and an increase over 1915 of $356,256.04.

Ore Royalties.

1917	$119,576 04
1916	49,877 62
1915	26,268 74

An increase in 1917 of $69,698.42 over 1916 and an increase of $93,307.30 over 1915.

Net earnings for fiscal year 1917	$516,700 56
" " 1916	528,705 46
" " 1915	210,538 63

Decrease 1917 of $12,004.90 as compared with 1916.
Increase 1917 of $306,161.93 as compared with 1915.

We have transmitted to Provincial Treasurer for the year under review, cheque for two hundred and fifty thousand dollars ($250.000.00).

Mines and Minerals.

Mining Engineer's preliminary report only included herein. Regular and complete report for Fiscal Year 1917 will be specially published in usual form.

Patriotic Association.

The employees of Commission in 1915 formed themselves into a body known as " T. & N. O. Railwaymen's Patriotic Association," and through this source the following sums have been subscribed in monthly amounts and paid to " Canadian Red Cross Society " and " Canadian Patriotic Fund " to date of October 31st, 1917:

Total subscription to Red Cross Society	$16,754 10
Total subscription to Canadian Patriotic Fund	20,257 13
Commission's subscriptions	20,000 00
Donation to enlisted employees	13,765 16
Total	$70,776 39

The above is exclusive of many personal subscriptions made direct by members of Commission and is exclusive of monthly payments to the 50,000 Club by the entire office staff, Toronto.

Roll of Honour.

Since the commencement of the war in August, 1914, up to date of October 31st, 1917, over twelve (12) per cent. of Commission's employees have joined the colours of their respective countries—particularly Russians and Italians.

To all those joining the ranks of the Canadian Expeditionary Forces—prior to Military Service Act of 1917 becoming effective—the Commission have instituted an honorary recognition therein, in the form of a money donation to each member, and to this end the sum of thirteen thousand seven hundred and sixty-five dollars and sixteen cents ($13,765.16) has been disbursed.

Canada's Victory Loan.

During the recent nation-wide campaign in connection with the Finance Minister's offer of $150,000,000 5½ per cent. gold bonds, the employees of Commission subscribed the sum of $76,450.00, representing three hundred and seventy-five subscriptions.

The original amount of $150,000,000 was lost sight of and overwhelmed by the total subscriptions of four hundred and eighteen million dollars ($418,000,000), representing 802,000 holders.

The immediate object of the "Victory Loan" was to provide for the financial needs of the nation, but a most important and lasting result has been obtained in that the widespread distribution of the loan has brought into the ranks of investors large numbers who hitherto have not given any thought to making sacrifices in order to save. This will have a marked influence on the future.

Workmen's Compensation Act.

Since the inception of the Act in 1915, the Commission voluntarily placed themselves under the jurisdiction of the Board, and during period under consideration—January, 1915, to October, 1917, inclusive, thirty-four months—the results are as follows:—

One hundred and sixty-seven claims registered on Commission's books, and submitted to Workmen's Compensation Board for adjustment:—

92 claims passed and paid.
69 claims disallowed.
6 claims in abeyance.

The ninety-two claims passed and paid amount to $7,586.88, an average of $82.47. Liability insurance based on Commission's payrolls for period would have cost $45,998.80 in premiums to protect Commission against possible losses under this heading or an average premium cost of $499.98 to protect an average determined award of $82.47.

Insurance premium during period would be	$45,998 80
W. C. Board's awards amount to	7,586 88
Cost reduction available	$38,411 92

Fire Ranging.

From 1909 to 1917, inclusive, for fire ranging services along the line of T. & N. O. Railway the Commission have received from the Department of Lands, Forests and Mines, accounts which have been paid as follows:—

Year.	Amount.
1909	$16,963 86
1910	10,000 00
1911	20,000 00
1912	5,000 00
1914	5,000 00
1915	10,000 00
1916	29,374 00
1917	10,000 00
Total	$106,337 86

Forest Fires—Northern Ontario, July 29-30th, 1916.

Statement following brings Commission's position up to date of October 31st, 1917, and completes the losses of all properties destroyed under above heading—enumerating the loss values and insurance recovered—with percentages under accounts named:—

Buildings and structures	$40,034 35	
Building contents	2,498 41	
Bridges and culverts	1,091 85	
Freight in transit	38,747 85	
Freight in transit—steam shovel, derricks	9,023 99	
Rolling stock—foreign	54,462 70	
Rolling stock—additional	423 26	
Rolling stock—Commission's	7,671 53	
Sundry outstanding claims	7,385 48	
	$161,339 42	
Insurance recovered	112,552 06	
Commission's loss		$48,787 36
Fencing destroyed—no insurance	$3,001 00	
Ties destroyed—no insurance	3,310 96	
Track damaged—no insurance	520 04	
Telegraph poles and wires—no insurance	3,309 94	
Relief to fire sufferers—Special trains	1,491 53	
Relief to fire sufferers—transportation	8,077 10	
Relief to fire sufferers—telegraph account	164 13	
Fighting fires—sundries	14,987 26	
Commission's uncontrollable loss		34,861 96
Gross loss		$83,649 32
Commission's pro ratio of scrap recovery		2,985 59
Commission's loss—total		$80,663 73

There are several small outstanding claims under consideration which will be paid by insurance companies when presented—lateness of presentation in all cases being due to delay of claimants in making claims against Commission.

Comparison of payrolls since commencement of operation:—

1905	$216,119 37
1906	450,214 02
1907	574,959 09
1908	687,541 66
1909	681,072 47
1910	878,192 07
1911	783,218 89
1912	1,090,310 65
1913	1,218,473 04
1914	1,112,866 73
1915	953,209 41
1916	1,127,885 74
1917	1,273,967 54
	$11,048,030 68

It will be noted that fiscal year 1917 shows an increase over preceding year of $146,081.80 and this is occasioned by further increases in wages to the several departments noted below to the extent of the approximate amounts so shown:—

Transportation Department	$40,300 00
Maintenance of Way Department	52,850 00
Motive Power and Car Department	30,550 00
Miscellaneous	22,381 80
	$146,081 80

Statement relating to comparative costs of certain materials used in connection with rolling stock, track and general supplies—Fiscal Years, 1915-16-17.

Material.	1915	1916	1917	1917 % over 1916	1917 % over 1915
	$ c.	$ c.	$ c.		
Castings, Brass	3,564 00	5,300 00	7,900 00	50	122
" Grey Iron	2,043 00	2,043 00	2,250 00	10	10
" Steel	257 00	304 50	550 00	80	114
" Malleable	310 80	327 60	495 00	51	60
Cement	4,000 00	4,000 00	5,300 00	33	33
Felt, tarred	180 00	230 40	276 00	20	53
Gaskets, Steam Hose	165 00	167 50	226 45	35	37
Duck	600 00	850 00	1,090 00	28	82
Dry Batteries	337 50	412 50	420 00	2	25
Bluestone	408 00	720 00	720 00	.....	76
Zinc	246 00	450 00	450 00	.....	83
No. 16 B. Wire	357 00	436 25	1,014 50	133	184
Tyres	2,500 00	5,000 00	6,250 00	25	150
Nails	765 00	1,089 00	1,650 00	51	116
Harris Metal	450 00	450 00	566 00	26	26
Pig Lead	337 50	425 00	625 00	47	85
Babbit Metal	364 00	480 00	612 00	28	68
Car Brasses	5,346 00	8,700 00	11,700 00	35	119
Paint and Varnishes	3,500 00	4,000 00	4,240 00	6	21
Turpentine	241 50	269 50	269 50	.....	12
White Lead	221 25	321 25	397 75	24	80
Glass	908 65	915 45	1,120 00	22	23
Couplers	1,122 00	1,170 00	1,920 00	64	71
Iron Pipe, sundries	186 76	213 55	300 56	45	61
Hose, sundries	1,811 50	1,928 15	2,158 00	16	20
Lumber, sundry	3,025 00	3,300 00	3,850 00	22	27
Ice	2,360 00	2,560 00	3,600 00	51	53
Ties	24,000 00	24,000 00	26,250 00	9	9
Frogs, etc.	5,646 30	6,969 90	8,785 00	58	60
Miscellaneous	14,000 00	16,000 00	23,000 00	44	64
	79,253 76	93,043 55	118,166 06	27	50

NOTE.—The above table of comparative costs discloses that purchases of articles, based on same quantities and amounts in each year, cost in 1917 fifty per cent. (50%) more than 1915, and twenty-seven per cent. (27%) more than in 1916.

Bituminous Anthracite Coal.

The conditions surrounding the Bituminous Coal Market during the past year have been most perplexing and difficult, and emphasize the very serious distress suffered by the country at large in consequence of the general fuel shortage.

Owing to the enormous increase in manufacturing demands throughout the United States and Canada, and consequent increased railway tonnage due to existing war conditions, the demand for bituminous coal during the past two years has greatly exceeded the normal supply. Contributing to these conditions has been the disorganized labour market which particularly affected the mining industry. The greatly increased wages offered by steel mills and allied industries have practically established every other rate of pay in the zone of operation, and this is particularly true of Pennsylvania. When a steel company raises its base labour rate, other employers, if they wish to retain their men, must necessarily meet the advances, and in consequence, the prevailing rates of wages in coal mining are reflected in the cost of the coal at the mines. It is recorded that the lowest rate of pay in coal mining for commonest class of labour is $4.75 for an eight-hour day.

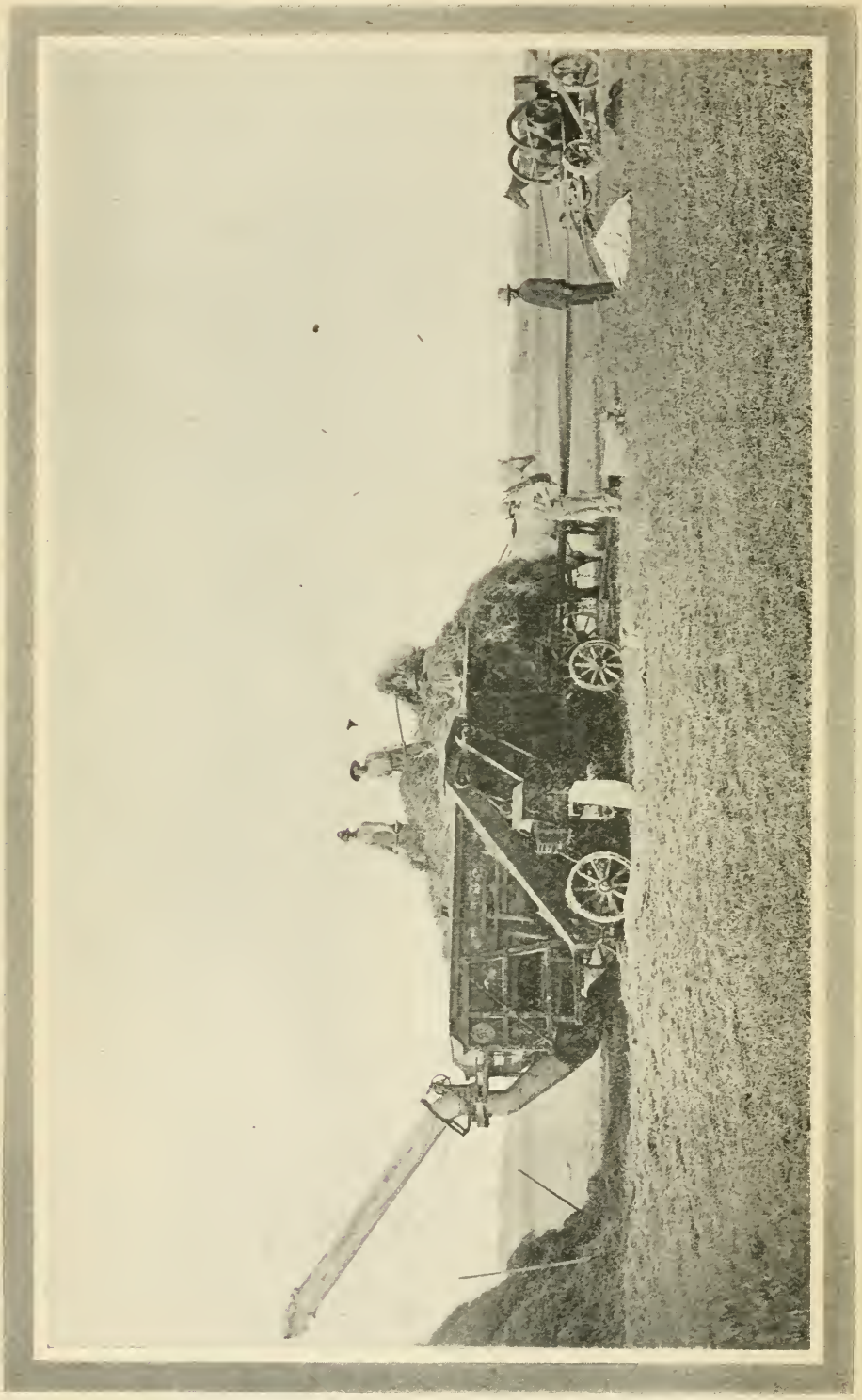
The conditions existing in 1915 forecast an unmistakable shortage in 1916—in that year was indicated a worse state of affairs for 1917, and this was fully demonstrated in the great difficulty the railways had in securing sufficient fuel to operate a limited and restricted schedule.

These conditions prevailed from the Atlantic to the Pacific, and it follows that the railways are confronted with an increase in fuel costs averaging one hundred per cent. (100 per cent.) advance, as compared with pre-war prices.

The United States Government estimates that there will be a coal shortage this year of fifty million tons. The operators maintain, however, that it will be much greater than this. In some cases they say, where the estimate of the visible supply was based on railway reports, the Government investigators have figured on the same coal as many as three times. The railroad congestion was responsible for the error. In order to get better delivery coal has been shipped over unusual routes, and thus each of the connecting lines that handled this new business had incorporated it in its report. However, a shortage of fifty million tons is sufficiently serious to create alarm and cause the railways great apprehension.

Owing to the very favourable coal contracts entered into by Commission in 1914-15, the supply of fuel for these periods was fully assured and extended into 1916, but in 1917 it was found necessary to go into the open market for requirements to supplement the contract fuel supply, which for obvious reasons was greatly reduced in quantity and difficult to secure.

The following statement fully covers all transactions under this heading for fiscal year 1917.



Threshing Alsike, 100 bushels, on farm of Mr. Roy Pacey, two miles from Milberta, Ontario, September, 1917.

STATEMENT RELATING TO BITUMINOUS COAL PURCHASED DURING FISCAL YEAR 1917.

Coal on hand November 1st, 1916, 44,097,369 lbs. at $4.62.8—$102.049.61.

	Lbs.	$ c.	$ c.
Buffalo & Susquehanna Coal & Coke Co.—			
November, 1916—Receipts for month	4,272,800	at 4 70	10,041 08
December " " "	4,579 600	4 70	10,762 06
January 1917 " "	10,015,400	4 80	24,035 67
February " " "	8,730,900	5 27	23,032 22
March " " "	14,046,400	5 62	39,467 37
April " " "	15.944,900	4 85	38,473 71
May " " "	4,817,400	4 86	11,681 14
June " " "	10,519,500	5 66	29,753 16
July " " "	15,958,700	7 54	50,164 51
August " " "	23,513,900	5 80	68,487 57
September " " "	17,006,700	5 60	47,177 98
October " " "	18,436,100	6 86	63,287 16
Receipts during fiscal year	147,842,300	.....	416,363 63
Seneca Coal Mining Co.—	Lbs.	$ c.	$ c.
February 1917—Receipts for month	257,900	at 7 90	1,018 70
March " " "	2,387,800	7 90	9,427 83
April " " "	674,100	7 88	2,657 25
Receipts during fiscal year	3.319,800	.....	13,103 78
W. B. Nicol Coal Company—	Lbs.	$ c.	$ c.
January, 1917—Receipts for month	60,800	at 7 90	240 16
February " " "	5,526,700	7 90	21,830 47
March " " "	3,361,400	7 86	13,207 85
April " " "	6,988,000	7 88	27,558 63
June " " "	101,000	7 86	396 42
Receipts during fiscal year	16.037.900	.....	63,233 53
Underhill Coal Company—	Lbs.	$ c.	$ c.
March, 1917—Receipts for month	1,079,400	at 8 00	4,317 60
April " " "	20,900,300	8 02	83,848 96
May " " "	2,854,700	8 06	11,490 17
June " " "	1,910.100	8 32	7.952 62
July " " "	913.100	8 38	3,812 19
Receipts during fiscal year	27,657,600	.....	111,421 54
Central Coal Mining Co.—	Lbs.	$ c.	$ c.
July, 1917—Receipts for month	766,000	at 8 32	3,267 42
August " " "	3,478,100	8 70	15,112 34
Receipts during fiscal year	4,244,100	.....	18,379 76
Sundry shipments—confiscated	248,700	9 87	1,226 82
Gross total	.....	.....	725,778 67
Special Representative's expenses	.....	.....	1,938 81
	243,447,769		727,717 48
On hand November 1st, 1916	22,049 tons		
Received during fiscal year 1917	99,675 "		
Total for period	121,724 tons		

For comparative purposes the quantity and values of coal consumed during last three years is given below:—

	Tons Consumed.	Total Cost.	Average per ton.
Fiscal year 1915	58,711	$245,747 00	$4 19
" 1916	83,243	363,861 00	4 37
" 1917	78,943	487,263 14	6 17

Which indicates an increase in cost of fuel in 1917 of approximately 50 per cent. over 1915 and 41.3 per cent. over 1916.

If consumption of coal in 1917 had equalled that of previous year, the cost to Commission, by reason of enhanced coal prices, would have been $513,609.31 or $149,748.31 in excess of 1916—41.3 per cent.

STATEMENT RELATING TO ANTHRACITE COAL PURCHASED BY COMMISSION DURING FISCAL YEAR 1917.

		Per Gross Ton.	
Delaware, Lackawanna & Western Coal Co., 1,050.3 gross tons	2,322,300 lbs.	$6.48.6	$6,814 32
W. H. Cox Coal Company	195,660	6.75	589 62
A. E. Campbell	2,000	14.50 (net)	14 50
J. B. McMurrich, 872 gross tons	1,953,280	6.48	5,649 35
Total	4,473,270 lbs.	$6.49	$13,067 79

Stock-taking October 31st, 1916, showing on hand at North Bay:—

Inventory statement	1,430,410 lbs.	Value	$4,791 84
Purchased during fiscal year to Oct. 31, 1917	4,473,270 lbs.	Value	13,067 79
Total	5,903,680 lbs.	Value	$17,859 63

STATEMENT RELATING TO COMMISSION'S PASSENGER TRAIN SERVICE FROM NOVEMBER 1, 1916, TO OCTOBER 31, 1917.

	No. Pssgrs.	Train Miles.	Earnings.	Earnings per Train Mile.
Train No. 1. (Local Service), North Bay to Cochrane	96,788	78,984	$122,872 35	$1 55
Train No. 2 (Local Service), Cochrane-North Bay	102,534	78,442	125,743 93	1 60
Train No. 47 (Local Service), North Bay-Cochrane, Nov. to Sept.	48,163	61,412	75,889 10	1 23
Train No. 46 (Local Service), Cochrane-North Bay, Nov. to Sept.	54,206	61,688	85,274 26	1 38
Train No. 47 (Local Service), North Bay-Englehart, October	3,146	3,716	4,267 95	1 15
Train No. 46 (Local Service), Englehart-North Bay	2,410	3,726	3,760 35	1 01
Train No. 9 ("National" Service), North Bay-Cochrane	32,820	39,981	64,863 00	1 62
Train No. 10 ("National" Service), Cochrane-North Bay	37,131	39,464	75,345 18	1 90
Trains No. 50, 51, 52, 53, 54, 55 (Local Service) Porcupine Branch	177,114	61,182	59,283 31	96
Trains No. 23, 24, 25, 26 (Local Service), Charlton Branch	10,122	8,301	2,710 17	32
Trains No. 4 and 6 (Local Service). Englehart-Cobalt	9,863	11,025	3,104 65	28
Trains No. 60, 61, 62, 63 (Local Service), Elk Lake Branch	17,517	20,770	6,886 65	33
Trains—various (Local Service), Iroquois Falls Branch	37,293	8,678	7,142 55	82
Summary	629,125	477,369	$637,143 45	$1,34

Insurance—Fire.

During the year fire insurance has been maintained on Commission's property to the extent of $2,020,245 valuation under the following headings:—

Buildings and Contents.

Division No. 1—buildings	$267,230 00	
" 1—contents	143,000 00	
" 2—buildings	107,225 00	
" 2—contents	33,650 00	
Kerr Lake Br. —buildings	600 00	
" —contents	100 00	
Charlton Br. —buildings	7,100 00	
" —contents	1,300 00	
Porcupine Br. —buildings	70,400 00	
" —contents	16,800 00	
Elk Lake Br. —buildings	16,100 00	
" —contents	3,250 00	
Nipissing Central Ry.—buildings	10,425 00	
" —contents	23,040 00	
		$700,220 00

Bridges and Trestles.

Division No. 1	$4,900 00	
" 2	10,950 00	
Kerr Lake Branch	5,000 00	
Charlton Branch	10,150 00	
Porcupine Branch	11,750 00	
Elk Lake Branch	12,400 00	
		$55,150 00

Freight.

Merchandise in transit	$200,000 00	
		$200,000 00

Rolling Stock.

Locomotives and tenders	$255,600 00	
Passenger equipment	320,700 00	
Freight equipment	308,150 00	
Work equipment	85,975 00	
Electric railway equipment	45,050 00	
Foreign equipment	50,000 00	
		$1,064,875 00
Total		$2,020,245 00

The rate of insurance is $1.50 per $100.00 for a period of three years, or 50c. per $100.00 per annum for period 1915-1917, inclusive.

Three year contract period expires December 1st, 1917.

Insurance under joint schedule is divided as follows:—

Western Assurance Co., 50 per cent.: Norwich Union Fire Insurance Society, 15 per cent.; Home Insurance Co., 35 per cent.

DENIS MURPHY, COMMISSIONER, DECEASED.

It is with great regret that we are called upon to record the death of our brother Commissioner, Denis Murphy, which occurred at his residence, Ottawa, on Saturday, March tenth, Nineteen seventeen.

For twelve years the late Commissioner had taken a prominent and active part in all matters pertaining to the duties of his position—with the paramount desire at all times to advance the best interests of the Temiskaming and Northern Ontario Railway, and also the various public utilities of the Province of Ontario, with which he had so long been closely associated, and had so faithfully served.

Resolution of condolence with his family was inserted in the minutes of the Meeting and copy of same transmitted to the widow with Commission's expressions of sorrow and deep sympathy in her bereavement.

AUDITORS' REPORT

We have pleasure in directing attention to a letter from Edwards, Morgan & Co., Chartered Accountants, Toronto, respecting the accounts.

J. L. Englehart, Esq., Chairman,

Temiskaming and Northern Ontario Railway Commission,

Toronto, Ont.

Dear Sir,—Under instructions from the Commissioners we have maintained a running audit of the accounts of the Commission for the year ending October 31, 1917. Our examination has included the Cash Receipts and Disbursements, Accounts Collectible, Accounts Payable, Agents' and Conductors' Accounts, Foreign Tickets, Foreign Freights, Car Mileage Accounts and Bank Balances.

We certify that all transactions relating thereto have been properly vouched, and that the Cash and Bank Balances have been duly accounted for. We have verified the balances of accounts outstanding and have ascertained that they correspond with the General Ledger Accounts.

We find the books in good order and all information asked for has been promptly given.

We are,

Yours faithfully,

Edwards, Morgan & Co.

COUNSEL'S REPORT—D. E. THOMSON, K.C.

Litigation.

At the end of the financial year there were no actions pending in which the Commission was defendant.

There is only one action pending in which the Commission is plaintiff, namely:

T. & N. O. vs. Abitibi Pulp and Paper Company. Action for indemnity under siding agreement in respect of amounts paid in settlement of claims arising out of an accident on the siding of the defendant Company. Negotiations for settlement of action are at present pending.

Damage Claims.

As usual a large number of claims have arisen during the year in respect of freight, baggage, etc., lost, destroyed, delayed, mislaid or damaged, also claims for personal injuries and for cattle killed on Commission's right-of-way, and claims of passengers for delay due to exceptional snow storms. Most of these claims have been adjusted or abandoned while others are still pending. None have been placed in suit.

Fire Claims.

A considerable number of claims have arisen in respect of baggage, freight, etc., damaged or destroyed in forest fires of July, 1916. Most of these claims have either been adjusted or abandoned. None have been placed in suit.

Insurance on Rolling Stock and other Property.

Satisfactory adjustment has been effected with Insurance Companies covering claims of Commission in respect of rolling stock and other property destroyed or damaged in forest fire of July, 1916.

Agreements, Leases, Contracts, etc.

A considerable number of agreements, leases and contracts, covering various miscellaneous matters between the Commission and others have been prepared and executed.

Grand Trunk Railway Company, Grand Trunk Pacific and National Transcontinental Railway.

This matter is still standing for adjustment. Meantime a temporary through train service over the Commission's lines is being operated in conjunction with Canadian Government Railways and Grand Trunk Railway on terms suitable for such limited service.

Cochrane Freight and Passenger Facilities.

An agreement with His Majesty the King, represented by the Honourable the Minister of Railways, covering the joint use by the Canadian Government Railways and the Commission of the passenger and freight facilities at Cochrane has been negotiated and executed.

North Bay Freight Yard

A number of questions have arisen during the year between the Commission and the Grand Trunk Railway in reference to the Grand Trunk's rights in the Commission's North Bay freight yard. Some of these have been adjusted, others are still pending.

Nipissing Central Railway.

A number of claims, including some for personal injuries, were made during the year. Some have been settled and others abandoned, but in no case has a writ been issued.

Cobalt Assessment.

During the year the question arose as to the assessment by the Town of Cobalt of the Nipissing Central Railway's right-of-way, overhead structures, etc. The Company appealed from the assessment and subsequently the matter was satisfactorily adjusted with the Town Authorities.

Miscellaneous.

Numerous other questions on various subjects affecting the Commission and the Nipissing Central Railway have arisen during the year calling for the consideration of the Legal Department.

T. & N. O. Railway Gardens, Englehart, Ontario, 1917.

ANNUAL REPORT OF CHIEF ENGINEER AND SUPERINTENDENT OF MAINTENANCE, T. & N. O. RAILWAY.

Year ended October 31st, 1917.

W. H. Maund, Esq.,

Secretary-Treasurer,

Toronto, Ontario.

Dear Sir,—I beg to submit the following report of the Engineering, Maintenance of Way and Mechanical Departments of the Temiskaming and Northern Ontario Railway, for the fiscal year ended October 31st, 1917.

Mileage and Equipment.

There has been no change in the main track mileage, but a considerable increase in the mileage of tracks, railway sidings and private sidings.

	Oct. 31, 1917.	Oct. 31, 1916.
Operated by the Commission:		
First Track	328.50 miles	328.50 miles
Second Track	1.70 "	1.70 "
Yard Tracks and Sidings	99.84 "	98.31 "
Private Sidings	14.21 "	10.44 "
	444.25 "	438.95 "
Leased to Grand Trunk Railway:		
Nipissing Junction Spur	2.10 "	2.10 "
Leased to Nipissing Central Railway:		
Main Track	10.45 "	10.45 "
Yard Tracks and Sidings	1.65 "	1.65 "
Private Sidings	1.03 "	1.16 "
	13.13 "	13.26 "

Details of all track changes are shown in statements included in this report. The equipment owned by the Commission consists of the following:—

	Oct. 31, 1917.	Oct. 31, 1916.
Locomotives	49	43
Passenger Cars	65	66
Freight Cars	593	620
Work Cars	107	89

Surveys and Construction.

Kirkland Lake Branch:

Surveys for the location of a branch line to serve the Kirkland Lake Gold Camp have been made. The proposed branch will connect with the main line at Swastika. The location that has been selected passes close to all producing mines and the more promising prospects. It will be six miles long, and as the country through which it passes is comparatively rough, and as the traffic will probably never be very heavy, grades of 1.5 per cent. and curvature up to 12° were used,

permitting the cost of construction to be kept within reasonable limits. At the beginning of the fiscal year when the survey was made, it was estimated that the cost of construction would be $125,000, and this amount was included in the Legislative Estimates.

The present is not an opportune time to commence any large engineering undertaking, as through the scarcity of labour and materials, the cost will be greatly in excess of that under normal conditions. The Commission has, however, closely watched the development of this promising camp and, as the necessary surveys have been completed, the branch can be placed under construction without delay, as soon as a decision to build is made.

Main Line Revision:

In the last report mention was made of three proposed revisions of the main line, viz:—

Mileage 54 —55
" 63 —66.5
" 80.8—81.2

The grading of the first of these was partially completed during the year 1916-17, the work being done by the Road Department forces.

This year tenders were called for the grading of the other revisions, those of Mileage 63—66.5 and 80.8—81.2, and the following is a comparison of the tenders received:—

Item.	Quantity.	Bourke & McGuinty.	Port Arthur Construction Company.	Jones Girouard & Company.	Dominion Construction Company.	Henderson & Angus, W. A. Cockburn and Lindsay & McCluskey
		Unit price.	Unit price.	Unit price.	Unit price.	Unit price.
		$ c.	$ c.	$ c.	$ c.	$ c.
Clearing	24 acres ..	60 00	60 00	80 00	90 00	80 00
Close Cutting	1 acre ...	45 00	75 00	60 00	40 00	150 00
Grubbing	2 acres ..	200 00	150 00	200 00	200 00	175 00
Solid Rock	20,600 c.y.	1 94	1 70	1 75	1 85	2 40
Loose "	4,000 "	75	75	80	75	80
Common Exc.	50,000 "	54	35	40	40	60
Overhaul	50,000 "	01	01	01	01	01
Telegraph poles cut on R. of W.	Each	1 00	1 00	3 00	1 00	50
Fence posts cut on R. of W...	"	10	10	10	15	05
Ties cut on R. of W.....	"	20	25	28	20	20
Timber cut on R. of W. per 1000 ft. B.M.....	.....	15 00	8 00	10 00	2 50	8 00
Concrete						
1:2:4.....	Per c.y...	15 00	13 00	12 00	14 00	10 00
1:3:5.....	66 " ..	15 00	12 00	10 00	13 00	9 50
Cast Iron Pipe						
12in. Dia.....	20 lin. ft.	25	1 00	25	60	15
Concrete Pipe						
24in. Dia.....	45 lin. ft.	75	1 25	75	2 00	50
36in. Dia.....	180 " "	1 00	1 50	1 50	2 50	50
Total tender based on estimated quantities.....	.....	73,557 75	58,973 25	63,098 75	65,620 00	86,302 50

The lowest tender, that of the Port Arthur Construction Company, was accepted and a formal contract was entered into by the Commission and the Company. The contractors have experienced great difficulty in obtaining the necessary labour, but good progress has been made on the larger of the two diversions, that between Mileage 63 to 66.5, over half of the grading having been completed. All of the grading on both diversions should be completed by July 1st, 1918.

Additions to Road and Equipment.

ROAD.

During the year efforts were made to carry on as fully as possible those works which were required for the betterment of the Commission's property. The more important of these improvements and additions are:—

North Bay Junction:

The enlargements of the locomotive repair shops, under construction at the end of the last fiscal year were completed as follows:—

Brick Extension at east end of Machine Shop, 52′ 9″ x 85′ 6″.

Brick Extension on north side Machine Shop, 25′ x 100′.

New Frame Blacksmith Shop, 30′ x 80′, with an annex 20′ x 27′ to house flue cleaning machines.

New Frame Wheel Shop, 30′ x 80′.

This work was all done by the Bridge and Building Department, except the brickwork, a contract for which was awarded W. A. Martyn, North Bay.

The following additions were commenced and completed during the year:—

An electric motor hoist for handling the ice in ice house.

All concrete foundations for new machine tools for machine shop and blacksmith shop.

A new oil and waste reclaiming plant building 12′ x 18′.

A combined Car Department Stores Building and Blacksmith Shop 17′ x 80′, also scrap rubber house 10′ x 30′, with enlargement of scrap bins and platforms.

Kaustine lavatories were installed in the Master Mechanic's office building and at coach shop, while a large one is now being installed for the machine shop.

Mileage 14.26.—Timber culvert replaced by a 24″ concrete pipe.

Mileage 30.76.—Beam culvert replaced by a 36″ concrete pipe and embankment.

Mileage 40.9.—A spur siding 767′ long was put in for the Pembroke Lumber Company, who were taking out a large quantity of logs east of Diver. This siding is now being moved to Mileage 42.8.

Mileage 43.7.—The McNamara Lumber Company are also taking out considerable lumber in this vicinity. A spur siding 964′ long was constructed for them at Mileage 43.7 and another 828′ long at Mileage 46.7.

Mileage 45.25.—A spur siding 780′ long was built for the Spanish River Pulp and Paper Company for handling pulpwood.

Mileage 52.81.—Open beam culvert replaced by a 30″ concrete pipe and embankment.

Mileage 93.25.—A spur siding 622′ long was built for Mr. G. C. Smith.

New Liskeard Spur:

A 12′ open beam culvert was constructed on this spur.

Uno Park:

A freight shed 30′ x 30′ was constructed to take care of the growing business at this station.

A kaustine lavatory was installed in the Agent's residence.

Mileage 120.4.—A spur siding 300′ long is being built to provide facilities for the shipment of forest products.

Earlton Junction:

Two stock pens 35′ x 40′ were built to take care of the requirements of this growing farming centre.

Leeville:

A standard frame shelter 10′ x 30′ was built for the accommodation of passengers waiting for trains at this stop.

Mountain Chutes:

The standard frame shelter at Three Nations station on the Porcupine Branch was moved to this flag stop.

Englehart:

In August last a portion of one of the tenement houses was destroyed by fire. Our forces made the necessary repairs, also put concrete floors in the basements and installed sewer and water systems.

A car foreman's office and shop 20′ x 36′ was built, also a hard coal shed 14′ x 18′ for storing coal for the passenger cars.

Mileage 148.—A spur siding 239′ long was built for Thomas Woollings. It is expected that a considerable quantity of forest products will be shipped from this point.

Mindoka:

A spur siding 282′ long was built at this place.

Mileage 153.—A spur siding 425′ long was built at this point to serve the mining district to the east of the railroad.

Mileage 162.3.—The filling of this trestle was completed.

Swastika:

To increase the facilities for handling the traffic in coal at this station a trestle was built so that the cars could be unloaded without delay and the coal hauled away later. In this connection a spur siding 432′ long was built.

Mileage 181.3.—The timber trestle at this point is being replaced by a 55′ steel span and embankment.

Bourkes:

A freight shed 25′ x 25′ and an employee's camp 14′ x 18′ were built at this station.

Vimy Ridge:

The standard frame shelter at Connaught was moved to Vimy Ridge on the completion of the new station at the former place.

Matheson:

The fire of July 29th, 1916, destroyed all the Commission's buildings at Matheson. At the close of last fiscal year these had all been completely rebuilt with the exception of the stone passenger station. The station was rebuilt with brick, all the work being done by our own forces.

Nushka:

A standard frame shelter 10′ x 35′ was built to replace the one destroyed in the fire of July 29th, 1916.

Monteith:

A frame freight shed 20′ x 30′ was built by our own forces.

To serve the needs of this growing community a frame station 25′ x 45′, with agent's residence included, is being built by contract, the successful tenderers being Van Rassel Bros. of Cochrane. The following is a comparison of the tenders received:—

6 inch Tile Drain, Wooden Platform, Total Cost of Work included in Specification.

Contractor.	Lump sum price.	Cemented joints.	Open joints.	Cedar mudsills.	Pine joists and planking.	Tenders.
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Van Rassel Bros., Cochrane.....	6,550 00	452 00	81 00	190 40	1,061 50	8,334 90
Henderson and Angus, North Bay.	8,437 00	367 25	81 00	57 12	1,158 00	10,100 37
J. P. Quinlan, North Bay.....	8,350 00	452 00	94 50	238 00	1,061 50	10,196 00
D. Barker & Co., North Bay.....	8,800 00	395 50	87 75	190 40	1,061 50	10,535 15
T. N. Colgan, North Bay	7,033 00	423 75	98 55	95 20	965 00	8,615 50

Kelso:

A standard frame shelter 10′ x 35′ was built to replace the one destroyed in the fire of July 29th, 1916.

Porquis Junction:

A considerable enlargement of this yard was started, but owing to the shortage of labour the programme as laid out was much curtailed. However, sufficient additional sidings were provided to greatly increase the traffic handling facilities of this important junction point. A total of 5,618 lin. ft. of sidings was laid and seven switches installed. Besides the tracks laid, the culverts, wherever necessary, were lengthened and other improvements made.

Nahma:

The section house and tool house destroyed by the fire of July 29th, 1916, have been rebuilt by our own forces.

Cochrane:

Three camps, each 18′ x 34′ were built for the employees of the Motive Power and Car Department.

Suitable lunch counters, refrigerators and other necessary equipment, having been installed in the station restaurant, it was opened and operated by the lessee Mr. Arthur Stevens, effective August 1st, 1917.

A transfer siding 2,324′ long was built for the interchange of traffic between the T. & N. O. and C. G. Railways.

Car repair tracks are now under construction.

Jacinto:

A standard frame shelter 8′ 6″ x 12′ was built.

Iroquois Falls:

The engine shed destroyed in the fire of July 29th, 1916, was rebuilt.

A bunk-house 18′ x 24′ was built for the employees of the Motive Power and Car Department.

The four semi-detached tenement houses under construction at the end of last year were completed.

A 40′ extension was built to the west end of the freight shed and 25′ of the east end of the building made into freight offices.

Lavatory fixtures and drainage system was put in the station and electric light systems installed in the station and the dwelling houses.

A great deal of work was done in fixing roadways on the station grounds and improving the grounds.

To handle the ever increasing business from the mill of the Abitibi Power and Paper Company, another transfer siding 836′ long was installed by the Commission and a coal unloading spur 616′ long was built for the company.

Connaught:

Connaught, situated on the Frederick House River, is rapidly developing into a very important point for the shipping of forest products.

The St. Maurice Lumber Company has erected a large mill for the rossing of pulpwood, and constructed a siding 5,630′ long from Barber's Bay along the old lake bottom to serve their plant.

Reamsbottom & Edwards have also completed a large mill for rossing pulpwood and have constructed two spurs, one 1,360′ and the other 1,005′ long to serve their plant.

Owing to the growing importance of the shipping from this point, a combined station and freight shed 25′ x 65′ has been erected.

A one storey frame agent's dwelling 22′ x 42′ 6″, and a sectionmen's bunkhouse 14′ x 18′ have been built.

On September 12th last the pumphouse was destroyed by fire. A new one has been built on a more suitable site.

Mileage 11.0. Porcupine Branch.—A spur siding 262′ long was put in for the Monteith Pulp and Timber Company.

Hoyle:

At Hoyle the Porcupine Pulp and Lumber Company has erected a large mill on the bank of the Porcupine River for the handling of pulpwood and lumber. A spur siding 1,132′ long was installed to serve the mill.

Mileage 18.4, Porcupine Branch.—A spur siding 247′ long was built for J. M. Forbes for the handling of forest products.

Timmins:

The new brick passenger station, under construction at the end of last year, was completed by the contractors, Messrs. Henderson & Angus, North Bay. The old frame station was moved to a more suitable site and is now used exclusively as a freight shed and office.

In connection with the change of location of the freight shed, additional sidings were provided as follows:—

No. 1	Freight	Shed	Track	—438′	long.
No. 2	"	"	"	—360′	"
No. 1	Team	Track		—712′	"
No. 2	"	"		—768′	"
No. 3	"	"		—439′	"

Except where otherwise noted, all the above additions were made by the Commission's forces.

Equipment.

The Mechanical Department has suffered similarly from the scarcity of labour and materials, and despite the most strenuous efforts to relieve it there has grown an accumulation of repairs to rolling stock. At the beginning of the fiscal year six new Mikado locomotives were received from the Canadian Locomotive Works, Kingston. These were of the greatest assistance in handling the traffic during the year. Arrangements are now being made to have a number of the older locomotives repaired at an outside shop to relieve the situation. At the same time these locomotives will be equipped with superheaters and other modern devices that will largely increase their efficiency.

In the accompanying report of the Master Mechanic will be found a very complete statement showing the amount and character of repairs that have been made to rolling stock.

Maintenance of Way.

In the last annual report reference was made to the increasing scarcity of labour and difficulty in obtaining materials required for repairs and renewals. During the present year these difficulties greatly increased. It may be truly said that at no time in the past have the railways of Canada been confronted with the conditions they are meeting at present.

It has been necessary to greatly curtail the progress of maintenance of way work that was laid out, and in many respects only the absolutely essential work could be performed.

Contracts for rails, ties and other track material required for current renewals had been made, but the contractors failed to fill their contracts, and it was necessary to make only partial renewals of rails and ties. The Commission's policy of a high standard of maintenance in former years has enabled it to meet the present conditions without serious deterioration of the track and roadbed.

Future Tie Supply.

The Commission has obtained from the Department of Lands, Forests and Mines, the reservation of the tie timber on several townships tributary to Night Hawk Lake, as shown on the accompanying map. There are several large stands of jack pine on this reservation from which it is estimated the Commission will be able to obtain all the ties it requires for renewals for at least twenty years. It is proposed to contract the cutting of the timber and the making and delivering of the ties at Connaught, where the Porcupine Branch crosses the Frederick House River. The timber will be cut under suitable restrictions and necessary precautions will be taken to preserve the reservation from damage by fire.

It is hoped that before long a creosoting plant will be built in Northern Ontario, at which all ties could be creosoted. A proper treatment with creosote will probably increase the life of a jack pine tie from eight to twenty years, provided suitable tie plates are used to protect the face of the tie from mechanical wear. The growing scarcity of suitable tie timber and the increased cost of ties, and the greatly increased wages now paid trackmen, make a reduction in the tie renewals a matter of first importance.

Wages of Employees.

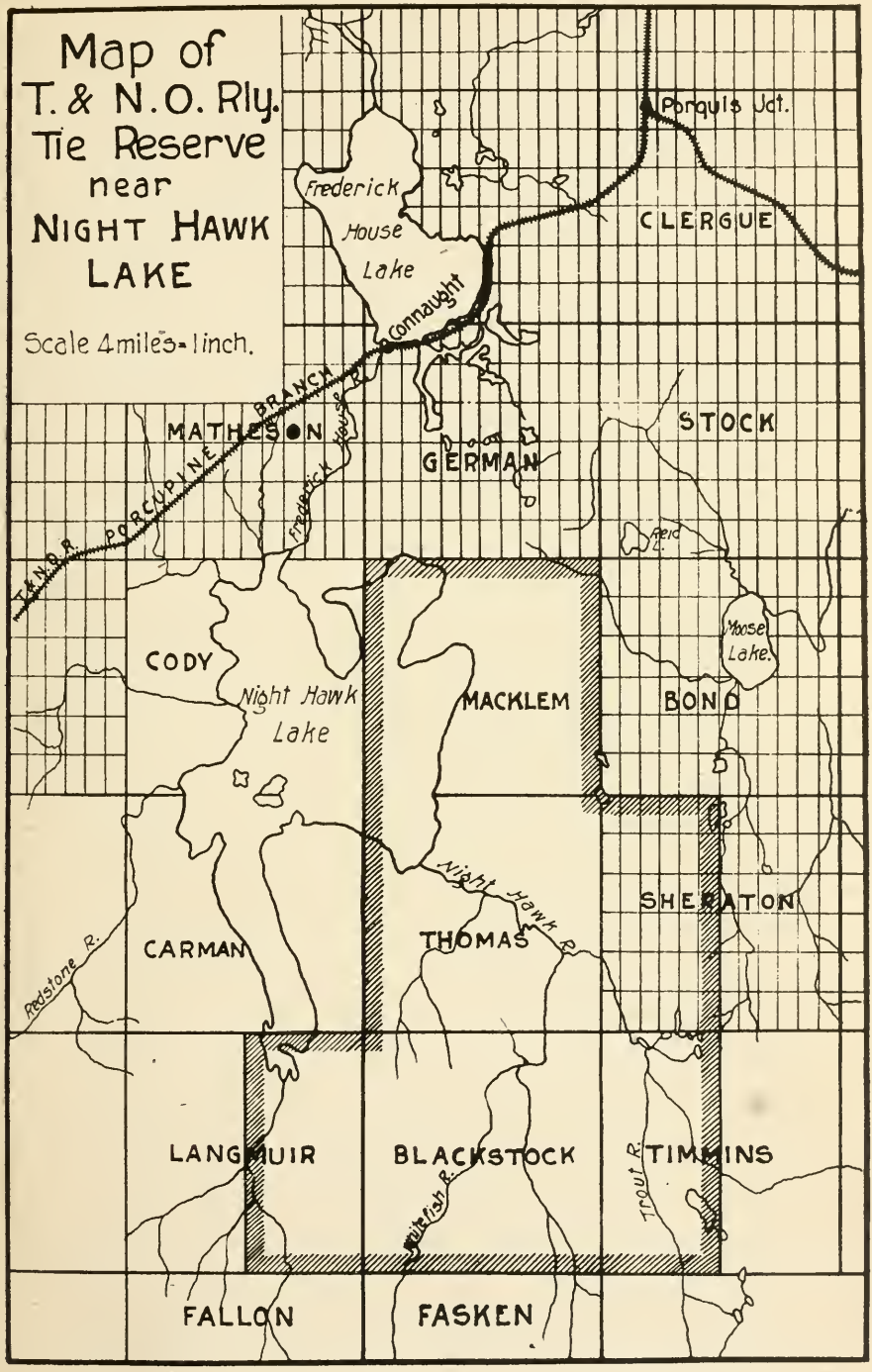
During the year there has been a great increase in our expenditures, notwithstanding the most energetic efforts that have been made to reduce our operating expenditures. These increases are almost altogether due to the very great advance in the cost of all materials that are used and the increased rates of pay to employees.

During the year all organized employees in the Motive Power and Car Departments and the Maintenance of Way Department have been granted revised rules of service and greatly increased rates of pay.

The following tables show a comparison between the principal rates that were paid in October, 1916, and October, 1917:—

Motive Power Department.

	Oct., 1917. Per hour—cents.	Oct., 1916. Per hour—cents.
Machinists:		
Machinists	46	40
Apprentices—First year	19	13
Second "	21	15
Third "	22	16
Fourth "	25	18
Fifth "	30	24
Boilermakers:		
First-class Boilermakers	47	41
Second-class "	43½	37½
Tubers	41½	32½
Boiler Washers	35½	25
Boiler Washers' Helpers	33½	22½
Boilermakers' Helpers	31½	23
Apprentices—First year	21	
Second "	22	
Third "	25	
Fourth "	29	
Blacksmiths:		
Charge hand	46½	36½
First Fire	43½	34½
General Blacksmiths	40½	33½
Helpers—First Fire	34½	23
General Blacksmiths' Helpers	33½	23
Pipe-Fitters, Coppersmiths and Tinsmiths:		
Pipe-Fitters	41½	35½
Coppersmiths and Tinsmiths	40½	34½


Map of
T. & N.O. Rly.
Tie Reserve
near
NIGHT HAWK
LAKE
Scale 4 miles = 1 inch.
Porquis Jct.
Frederick House Lake
Connaught
CLERGUE
STOCK
MATHESON
GERMAN
T. & N. R.
PORCUPINE BRANCH
Frederick House R.
Reid L.
Moose Lake.
CODY
Night Hawk Lake
MACKLEM
BOND
Night Hawk R.
SHERATON
Redstone R.
CARMAN
THOMAS
LANGMUIR
BLACKSTOCK
TIMMINS
Quinsh R.
Trout R.
FALLON
FASKEN

Car Department.	October, 1917.		October, 1916.	
	Shop.	Running.	Shop.	Running.
	Per Hour—cents.		Per Hour—cents.	
Patternmaker	.50	.....	.39	
Carpenters—Coach	.42½	.41½	.36½	.35½
Locomotive Cab	.41	.....	.35	
General	.39½	.37½	.33½	.31½
Freight Car	.37½	.....	.31½	
Wood Machinist	.42½	.....	.36½	
" " Helper	.31½	.....	.25½	
Car Inspectors	.....	.35	.....	.29
Car Repairers	.33½	.32½	.27½	.26½
Air Brake Cleaners	.34½	.33	.28	.27
Triple Tester	.38½	.....	.32½	
Coach Truck Repairers	.33½	.....	.27½	
Car Cleaners—Sleeping and Diners	.....	.31½	.....	.25½
" —Others	.....	.30½	.....	.24½
Painters—Decorators and Letterers	.40½	.39½	.34½	.33½
" —First-class brush hands and varnishers	.38½	.37½	.32½	.31½
" —First class helpers	.33½	.32½	.27½	.26½
" Helpers, general	.31	.30	.25	.24
Tender Truck Repairers	.35½	.....	.....	
Electricians	.39½	.38	.....	
" Helpers	.33½	.32½	.....	

Maintenance of Way Department.	October, 1917.		October, 1916.	
	Per Day—Ten Hours.		Per Day—Ten Hours.	
Yard Section Foremen:—				
North Bay Jct., Englehart and Cochrane. Latchford, Cobalt. Haileybury. New Liskeard and Timmins	$3 80		$3 20	
	3 60		3 00	
Regular Section Foremen	3 50		2 90	
Assistant Yard Foremen	3 15		2 50	
Section Labourers	2 65		2 10	
Extra Gang Foremen	3 50 to	$4 80	3 40 to	$4 10
(Steel Switch and Lift Foremen to receive maximum rate)				
Steam Shovel and Ditcher Foremen (per month)	110 00 and	board	100 00 95 00	S. Shovel Ditcher.
Snow Plow and Flanger Foremen (when called for duty)	4 50 and	expenses.	3 90	no expenses.
Snow Plow and Flanger men (when called for duty)	3 20 "	"	2 25	"
Bridge and Building Foremen	4 30 to	4 70	3 90	
Bridgemen	3 10 "	3 75	2 70 to	2 90
Carpenters	3 10 "	3 75	2 70 "	3 10
Foreman Painters	4 10 "	4 40	3 50 "	3 70
Painters	3 00 "	3 30	2 50 "	2 75
Pump Inspector (per month)	110 00		90 00	
Pumpmen—				
Sunday pumping (per month)	77 00		60 00	
No " " "	72 00		58 00	

Comparative Statements.

FENCING.

The following right of way and station grounds fence was repaired and renewed:—

	Length—Rods.
First Division:	
Mileage 3.5 to 4.5—Both sides	640
" 6 to 7 —Both sides	640
" 97.5 to 98 —East side	240
Second Division:	
Mileage 196 to 210—Both sides	8,960
Iroquois Falls Branch:	
Mileage .5 to 7 —South side	2,080
" .5 to 6 —North side	1,760
Total	14,320 rods, or 44.8 miles.

The fence repaired on the Second Division and on the Iroquois Falls Branch was burned in the fire of July 29th, 1916.

New standard right of way and station grounds fencing was constructed as follows:—

	Length—Rods
First Division:	
North Bay Terminals	20
Second Division:	
Englehart Station Grounds	150
Mileage 234.5 to 235.5—East side	240
Total	410 rods. or 1.3 miles.

Standard Section Foreman's Dwelling, T. & N. O. Railway Commission, Otter, Ontario.

Potato Patch at Section Foreman's Dwelling, Otter Station, Ontario.

Private Sidings:

The following statement includes all private sidings laid or extended during the year:—

Location.	Name.	Length.	Remarks.
Main Line:		Feet.	
Trout Mills	Wm. Milne & Son	494	Lumber yard.
Mile 40.9	Pembroke Lumber Co.	767	For loading logs.
" 43.7	McNamara Lumber Co.	964	" "
" 45.25	Spanish River Pulp & Paper Co.	780	For loading pulpwood.
" 46.7	McNamara Lumber Co.	828	For loading logs.
Doherty	Port Arthur Construction Co.	294	Handling contractors' supplies.
Mile 66.25	" "	460	Handling contractors' supplies.
" 93.5	G. C. Smith	622	For handling forest products.
" 148	Thomas Woollings	239	For handling forest products.
Iroquois Falls Branch:			
Iroquois Falls	Abitibi Power & Paper Co.	616	For handling coal.
Porcupine Branch:			
Barber's Bay	St. Maurice Lumber Co.	5,630	To serve rossing plants.
Connaught	Reamsbottom & Edwards	1,360	" "
"	" "	1,005	" "
Mile 11.0	Monteith Pulp & Timber Co.	262	For loading forest products.
Hoyle	Porcupine Pulp & Lumber Co.	1,132	For loading forest products.
Mile 18.4	J. M. Forbes	247	For loading forest products.
	Total	15,700	

The following includes all private sidings removed or shortened:—

Location.	Name.	Length.	Remarks.
Main Line:		Feet.	
Tomiko	Ferguson & McFadden	7,821	Balance of mill yard sidings.
Mile 40.9	Pembroke Lumber Co.	767	
" 105.5	McCamus & McKelvie	253	
	Total	8,841	

Meeting, Yard and Loading Sidings:

The following new sidings or extensions to existing sidings have been constructed to provide increased facilities at different points:—

Location.	Description.	Length.
		Feet.
Haileybury Spur	N. C. R. Main Line to Transfer Siding	203
Heaslip	Through Town Siding	746
Mindoka	Loading Spur	282
Mile 153	Public Spur	425
Porquis Junction	No. 1 Through Siding, East of Main Line	3,682
	No. 2 " " "	1,521
	Cross-over, Main Line to No. 1 Siding above	179
	Cross-over, Main Line to Iroquois Falls Branch	236
Cochrane	Transfer to T. C. R.	2,224
Iroquois Falls	Additional Transfer Siding	836
	Total	10,334

The following public or railway sidings were taken up or shortened:—

Location.	Description.	Length.
		Feet.
North Bay Junction	Rip Track shortened	180
Latchford	Town Siding taken up	399
Kerr Lake	No. 1 Through Siding taken up	730
Porquis Junction	Through Siding on West shortened	132
	Total	1,441

Tie Renewals:

Track ties were renewed as follows:—

——	Main Track.	Sidings.	Private Sidings.	Total.
First Division	26,401	3,694	20	30,115
Second Division	25,801	1,185	50	27,036
Kerr Lake Branch	1,221	.....	.....	1,221
Elk Lake Branch	388	.....	.....	388
Charlton Branch	2,818	72	.....	2,890
Porcupine Branch / Iroquois Falls Branch	2,191	13	80	2,284
Total	.....	.....	.....	63,934

Twenty-six sets of switch ties were also renewed.

The following table, giving a comparison of track tie renewals for the past four years, shows a decided reduction in the number of ties renewed during the last two years. This is accounted for partly by our inability to secure sufficient ties and labour to put them in the track, and partly by the fact that the ties used during construction have been nearly all renewed and renewals are now more evenly distributed from year to year:—

Fiscal Year.	Main Line.		Branch Lines.		Sidings and Spurs.	
	Total.	Per Mile of Track.	Total.	Per Mile of Track.	Total.	Per Mile of Track.
1914.....	87,259	346	290	3	9,414	88
1915.....	87,948	348	3,683	46	11,680	106
1916.....	72,480	287	9,084	114	11,270	107
1917.....	52,202	205	6,618	84	5,114	45

Ballasting:

Owing to the shortage of labour no ballasting was done this year.

Rail Renewals:

The rail renewals for the year were as follows:—

Mileage 72 to 76—4 miles 90 lb. A.R.A. Type "A" Rail.
Mileage 76 to 79.75—3¾ miles 85 lb. C.P.R. Section Rail.

Miscellaneous Betterments.	1916.	1917.
Timber trestle replaced by embankment	0 ft.	311 ft.
Concrete tile used for culverts	1,556 "	921 "
Corrugated iron	146 "	262 "
Tile drain to underdrain roadbed	0.56 miles.	0 miles.
Embankments restored to width by trainfilling over a total of	26.5 "	6.0 "
New right-of-way fence constructed	6.29 "	1.3 "
Public road crossings constructed	7	2
Private road crossings constructtd	7	6

ACCIDENTS.

Date, 1916.	Name of Person Injured.	Nature of Employment.	Place of Accident.	Work at which Employee was Engaged at Time of Accident.	Extent of Injury.
Nov. 2	Edward Rose	Blacksmith	North Bay	Upsetting shackle bar	Ruptured.
" 7	Geo. Bernette	Laborer	North Bay	Loading Timber	Foot crushed.
" 15	Jos. Sasseville	Sectionman	Widdifield	Handling rails	Finger jammed.
" 29	Geo. Goli	Laborer	Dane Pit	Picking clay	Foot bruised.
Dec. 1	T. Forzezuk	Laborer	North Bay	Handling rails	Toe bruised.
" 5	Enos. Scobie	Laborer	Mileage 6¼	Handling rails	Left shoulder and back bruised.
" 6	Wm. Swain	Helper	North Bay	Cleaning coach	Hand, arm and side bruised.
" 11	Fred. Palmer	Laborer	Mileage 76	Handling rails	Finger bruised.
" 15	Robert White	Car Repairer	North Bay	Handling tools	Toe broken.
" 19	Chas. C. Miller	Car Inspector	Englehart	Attending heaters	Foot hurt.
" 20	Louis Rousson	Carman	Cochrane	Handling coal	Back injured.
" 30	Vincenzo Deluca	Laborer	Temagami	Riding on hand car and fell off in front of car	Ankle injured.
1917.					
Jan. 2	Hugh Allan	Inspector	Matheson	Drilling concrete	Hand injured.
" 3	Wm. Hiltz	Sectionman	Porquis Junction	Pulling on line and block at coal chutes	Leg injured.
" 5	W. Hilton	Helper	North Bay	Assisting boilermaker at work on engine	Cheek cut and eye bruised.
Feb. 1	B. Cipparone	Helper	North Bay	Holding clamp on tire, when it slipped and fell on his foot	Toe bruised.
" 2	J. Lamarche	Helper	North Bay	Fell into engine pit while walking in round-house	Knee bruised.
" 13	Geo. McIntosh	Laborer	North Bay	Planing a piece of board	Two fingers crushed.
Mar. 2	W. Silverthorn	Machinist's Apprentice	North Bay	Carrying tools in machine shop	Three fingers cut and bruised.
" 4	G. Travo	Sectionman	Cochrane	Unloading coal at coal chutes	Collarbone broken.
" 19	Jno. Belleveau	Laborer	Cochrane	Coaling engine	Foot bruised.
" 19	Mike Rota	Laborer	North Bay	Moving turntable	Side and back strained.

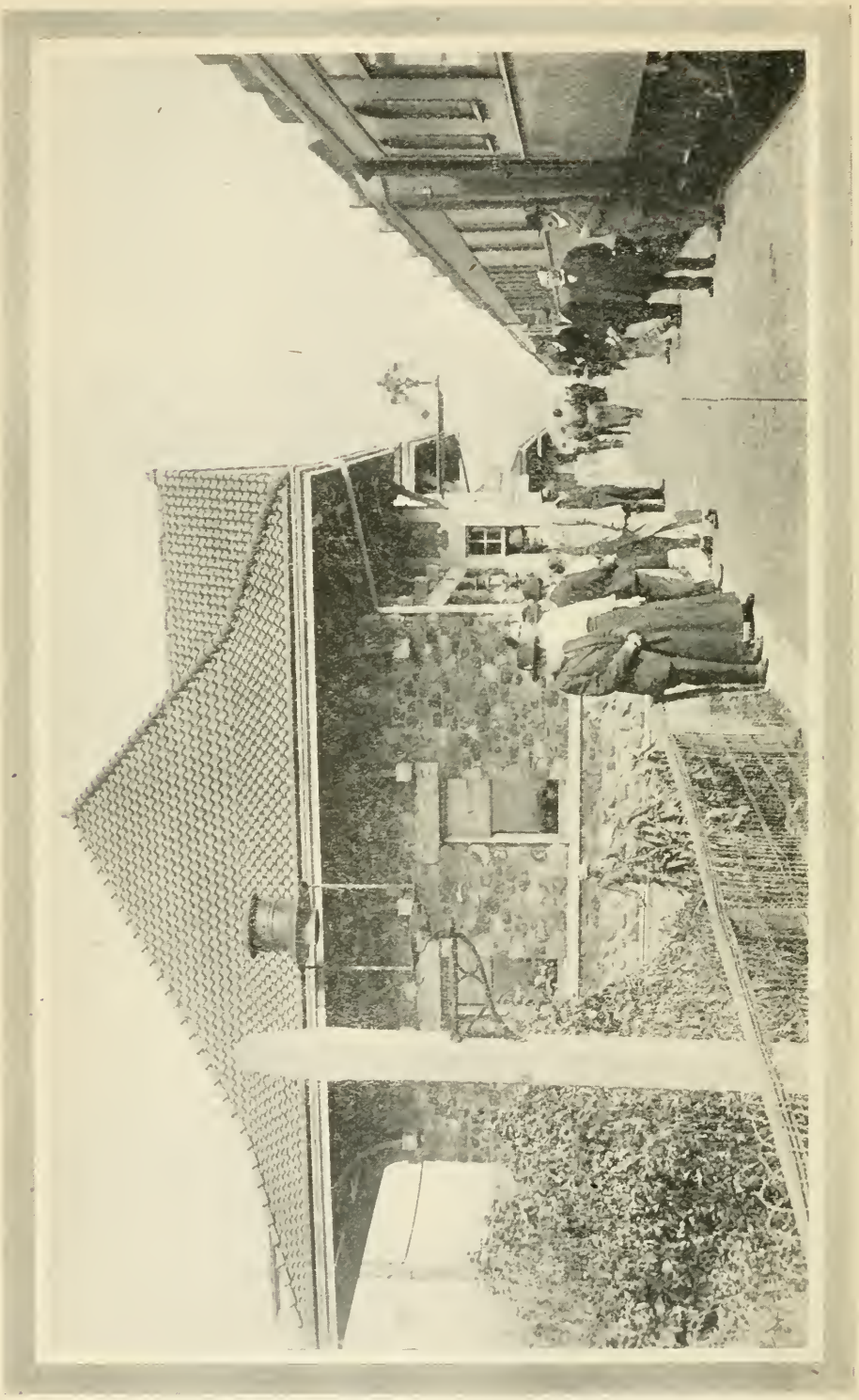
Mar.	23.....	Edward Thorning	Helper	Cochrane	Working on engine	Thumb smashed.
"	24.....	Edward P. Leach	B. & B. Foreman	Redwater	Building chimney, fell from scaffold	Two ribs broken.
April	22.....	Geo. Malin	Section Foreman	Dane	While riding on hand-car, blasting caps which were on the car exploded	Leg injured.
May	7.....	Wm. Cripps	Machinist	North Bay	Repairing locomotive	Thumb cut and bruised.
"	13.....	Geo. W. Powles	Machinist	North Bay	Repairing locomotive	Finger broken.
"	28.....	Enos Scobie	Laborer	Wabun	Handling ties	Arm fractured.
June	11.....	Wm. Munroe	Sectionman	Haileybury	Pumping hand-car	Finger bruised.
"	14.....	F. Cipparone	Blacksmith's Helper ..	North Bay	Handling tools	Toe injured.
"	22.....	F. Tignanelli	Hostler	Iroquois Falls	Cleaning locomotive	Back strained.
"	27.....	A. Jenson	Sectionman	Porquis Junction	Rerailing locomotive	Foot scalded.
July	10.....	Allan Johnson	Section Foreman	Kenabeek	Mowing grass	Foot injured.
"	22.....	Edward Rose	Blacksmith	North Bay	Repairing locomotive	Hand bruised.
"	24.....	Albert Marleau	Sectionman	Widdifield	Handling ties	Back injured.
"	27.....	Frank Duff	Pipefitter	North Bay	Repairing steam line	Hand cut.
"	28.....	Chas. Rose	Water Boy	Haileybury	Lighting fire for supper	Fatally burned
Aug.	4.....	Jas. Martin	Laborer	North Bay	Lifting automatic jack	Finger crushed.
"	4.....	Chas. W. Mould	Tenderman	North Bay	Repairing locomotive	Thigh scalded.
"	14.....	Robert Rodhy	Section Foreman	Mileage 7	Pouring coal-oil on fire	Legs and hands burned.
"	24.....	Nap. Dubois	Sectionman	Sesekinika	Lifting track	Toes bruised.
Sept.	17.....	N. Kalynick	Sectionman	Cobalt	Repairing track	Hip bruised.
Oct.	7.....	Wm. Baronet	Steam Shovel Cranesman	Barber's Bay	Removing steam shovel boom	Head cut.
"	15.....	Nathan Abramson	Laborer	Englehart	Handling ice	Shoulder bruised.
"	30.....	Francis Leppan	Machinist	North Bay	Placing piston rod in lathe ..	Finger injured.

The accompanying report of the Motive Power and Car Department for year ending October 31st, 1917, prepared by Master Mechanic Thomas Ross, contains additional detailed information in reference to the operation of this department.

In conclusion, I would take this opportunity of expressing appreciation of the faithful and efficient service rendered by the officers and employees.

Respectfully submitted,

S. B. Clement,
Chief Engineer and Superintendent of Maintenance.



T. & N. O. Railway Depot, Temagami, Ontario, September, 1917.

MOTIVE POWER AND CAR DEPARTMENT.

S. B. Clement, Esq.,
C. E. & S. of M.

Dear Sir,—Beg to submit the following report of the Motive Power and Car Department for the year ending October 31st, 1917.

New Locomotives:

In November, 1916, the Canadian Locomotive Company, Limited, Kingston, delivered the remaining four "Mikado" type locomotives on the contract of March, 1916. A general description of these engines was included in the annual report of the Motive Power and Car Department for 1916.

During the year that these locomotives have been in service they have proven very satisfactory.

Alterations and Repairs to Locomotives:

With the view of effecting all possible economy in the matter of fuel consumption, it has been the intention for some time to proceed with the installation of superheaters, brick arches, etc., on the older types of locomotives. All the engines built for the road since 1909 have been equipped with these devices which have thoroughly proven their merit.

Owing to labor conditions and volume of other work it has been impossible to go ahead with these changes at our shops here.

The matter has been taken up with the different locomotive manufacturers and the Canadian Locomotive Company have undertaken the work of equipping eight ten-wheel engines with these appliances, and at the same time, give these engines a complete overhauling.

New Freight Cars:

In May, contract was given the Canadian Car and Foundry Company, Limited, for 100 box cars, delivery of same to be made towards end of this year. These are to be 36'-80,000 lbs. capacity cars with steel framing and single sheathing. They will be equipped with Arch Bar trucks, friction draft gear, and inside metal roofs.

New Conductor's Caboose Cars:

During May, June and July, the Preston Car and Coach Company delivered the six caboose cars on their contract of June, 1916.

These cabooses are the T. & N. O. standard type, 29' long over end sills with steel underframes and equalized pedestal trucks.

New Machine Tools:

The following machinery has been added to the equipment of the Machine Shops at North Bay Junction:

One No. 6, type B. pneumatic hammer; one 200-ton electric hoist; one centering machine; one 24-inch shaper; one 8-inch power hack saw; one tube cleaning machine; one safe end machine; one tube welding furnace; one combination hot saw and tube expanding machine; one tube welding machine; one No. 02 stationary forge; one 5-ton hand travelling crane; one oil and waste reclaiming outfit, consisting of one 20-inch waste machine and one 15-inch centrifugal oil separator.

Summary of Extensive Repairs to Locomotives:

Since November 1st, 1916, the following locomotives have been through our shops at North Bay Junction for repairs:—

Given General Repair:—106, 108, 124, 131, 133, 137, 138, 150, 151.
Given Heavy Repair:—101, 111, 113, 117, 119, 123, 130, 134, 135, 136.
Given Light Repair:—106, 109, 123, 127, 133, 139, 145.

Note: The term "General Repair" as applied above refers to cases where an engine has been given a thorough overhauling and rebuilt. Heavy repair refers to cases where an engine has received such repairs as driving tires turned, driving boxes renewed, valves, piston rings, and side rod bushings renewed. Light repair refers to cases where an engine has received minor repair such as renewal of side rod bushings, piston rings and valve rings.

All requirements of the Dominion Railway Commission in regard to washing out and testing boilers, testing stay-bolts, examining nettings and dampers, etc., have been fully complied with, and during the summer months periodical inspection of all fire protective appliances on engines has been made by a Government Inspector.

Engine Despatch:

Statement showing the number of engines despatched from different terminal and divisional points during the year:—

Station.	Number of Engines Despatched.
North Bay Jct.	6,315
Elk Lake	391
Englehart	4,391
Iroquois Falls	362
Timmins	773
Cochrane	1,745
Total	13,977

The motive power has been generally assigned during the year as follows:—

Class of Service.	Number of Engines.
Passenger	15
Freight	28
Work	2
Switching	4

Locomotive Mileage:

The following statement shows mileage made by locomotives belonging to this railway during the year:—

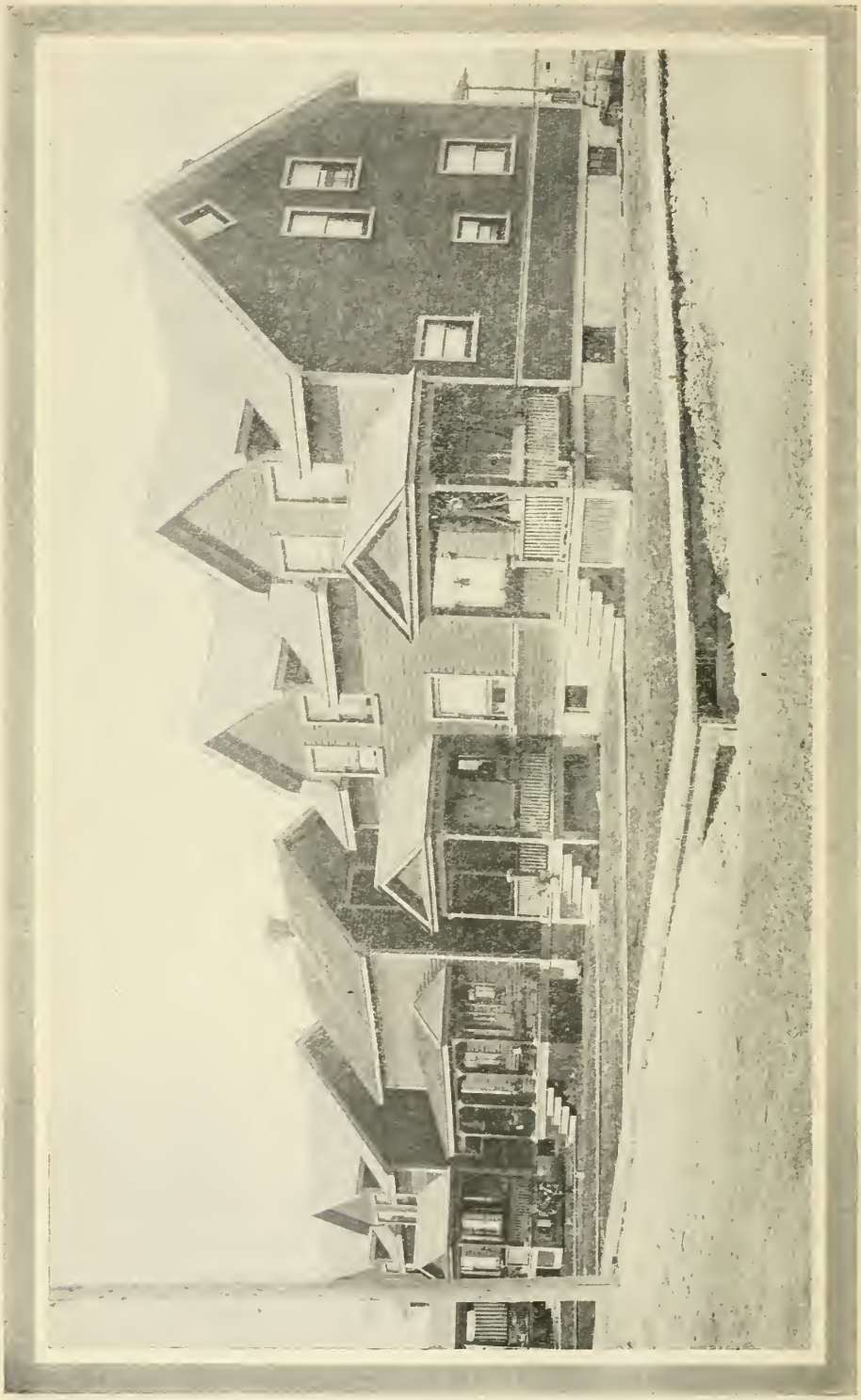
Engine No.	Miles Run.
101	24,762
103	28,294
104	8,184
105	24,643
106	22,751
107	21,539
108	22,528
109	34,109
110	27,030
111	19,908
112	36,387
113	30,356
114	25,203
115	12,164
116	9,794
117	22,900
118	26,484
119	24,292
120	6,702
121	33,357
122	36,032
123	26,858
124	7,917
125	31,895
126	21,617
127	31,046
128	37,552
129	16,334
130	15,362
131	2,637
132	16,603
133	33,876
134	32,569
135	53,216
136	48,777
137	31,306
138	22,534
139	26,683
140	27,227
141	35,249
142	33,092
143	46,601
144	32,509
145	39,445
146	37,979
150	30,579
151	28,098
152	20,130
153	35,635
	1,320,745

Repairs to Passenger Equipment:

Extensive repairs have been made to passenger equipment at North Bay Junction shops as follows:—

Class of Car.	General Repair.	Light Repair.
First Class	1	8
Second Class	1	10
Baggage and Express	..	3
Mail and Express	1	3
Parlor Cafe Cars	1	1

NOTE.—The Term "General Repair" as applied above refers to cases where a coach has had the interior and exterior finish of car removed, framing refitted, and trucks rebuilt.



T. & N. O. Railway Houses, Iroquois Falls, Ontario.

The term "Light Repair" applies to coaches having seat arms scraped and sanded, interior of car varnished, outside of car washed down and given two coats of varnish; trucks repaired.

Each first and second class coach given a general repair has been equipped with steel side sills, extra wooden sills, new friction buffers and draft gear, vestibule curtains and tail gates. The mail and express cars have been equipped with steel sills, new friction buffers and draft gear.

Parlor cafe car "Wasaksima" is now in the shop undergoing general repairs, and is being equipped with electric lighting system of the Safety Car Heating and Lighting Company's make with Edison storage batteries.

In addition to the above the official car "The Whitney" has been given a general repair and equipped with Commonwealth Company's cast steel six-wheel trucks, thus making all six-wheel passenger car trucks in use on this railway of one standard type.

Coach Cleaning:

Statement showing the number of coaches cleaned at the different stations during the year:—

Station.	Number of Coaches Cleaned.
North Bay Junction	2,878
Elk Lake	628
Englehart	1,198
Timmins	1,441
Iroquois Falls	628
Cochrane	2,493
Total	9,266

Repairs to Conductor's Vans:

During the past year fourteen of our conductor's vans have been through the shop for general overhauling and repairs.

Repairs to Freight and Work Equipment:

The staff maintained on freight car repair work in Carpenter Shop at North Bay Junction has rebuilt 17 flat cars, made heavy repairs such as new sills, new decking, trucks overhauled, and etc., to 34 flat cars, 5 box cars, and one stock car. On the repair track 28 flat cars have had new sills applied and 15 cars have been redecked. In addition to this, 814 T. & N. O. freight cars, 2,717 coaches and 18,678 foreign cars have been repaired and released from repair track at North Bay Junction.

Bills have been rendered against foreign roads for repairs to cars under rules adopted by the Master Car Builders' Association. Monthly bills have also been rendered against the Grand Trunk Railway for repairs to cars under terms and conditions of Grand Trunk Running Rights Agreement.

All work equipment such as snow ploughs, snow flangers, wrecking outfits, steam shovels, and boarding cars, etc., have been overhauled and given such repairs as were required to keep them in serviceable condition.

At different times during the year our wrecking outfit has been loaned to outside companies for which proper bill has been rendered in each instance.

Steel Tyres Turned and Wheels Applied Rolling Stock:

During the year forty-four pairs of driving wheels, one pair of trailing truck wheels, eighty-one pairs of coach wheels, forty-three pairs of tender wheels, thirty-one pairs of engine truck wheels, and sixteen pairs of street car wheels have been turned at North Bay Junction.

The following new tyres were applied to wheels: Thirty-four driving wheel tyres, twenty engine truck tyres, eight tyres for street car wheels.

One thousand four hundred and seventy-eight cast iron wheels have been pressed off axles, new wheels bored and mounted on these axles.

Sixty-nine pairs of wheels have been changed under passenger equipment and bad tyres turned.

New wheels have been applied to T. & N. O. freight and work equipment as follows:—

14	pairs new 33" C.I. wheels on	3¾ x	7" axles.
1,242	pairs new 33" C.I. wheels on	4¼ x	8" axles.
636	pairs new 33" C.I. wheels on	5 x	9" axles.
255	pairs new 33" C.I. wheels on	5½ x	10" axles.

Rolling Stock Destroyed:

We are glad to report that there have been no serious wrecks and little heavy damage to rolling stock on our line during the past year. T. & N. O. coach No. 112 was destroyed by fire at Englehart, January 14th, 1917; C. & N. W. 114746 by wreck at M.P. 153½, February 7th, 1917; D. P. & I 5154 by wreck at M.P. 222, February 25th, 1917; B. & S. 11346 by wreck at South Gillies, August 3rd, 1917.

In each case of foreign cars destroyed we have settled with owners for depreciated value of cars in accordance with Master Car Builders' regulations.

Seven of our flat cars and two steel underframe box cars have been destroyed on foreign lines and bills have been rendered against such companies covering depreciated value of cars, less value of serviceable parts returned, as per Master Car Builders' rules.

Work Turned Out of Carpenter Shop:

In addition to the regular work in connection with repairs to passenger, freight and work equipment, considerable miscellaneous work has been done in the carpenter shop for other departments, such as dressing lumber, making window framing and stair banisters, conductor's kit boxes, ladders, tool chest, notice frames, gang planks, transfer cases, standard explosive blocking, spot boards, hand sleighs, snow scrapers, flanger markers, station sign boards, bulletin boards, time table racks, barrel skids, repairs to office chairs, desks, cabinets, and platform trucks.

Equipment Owned:

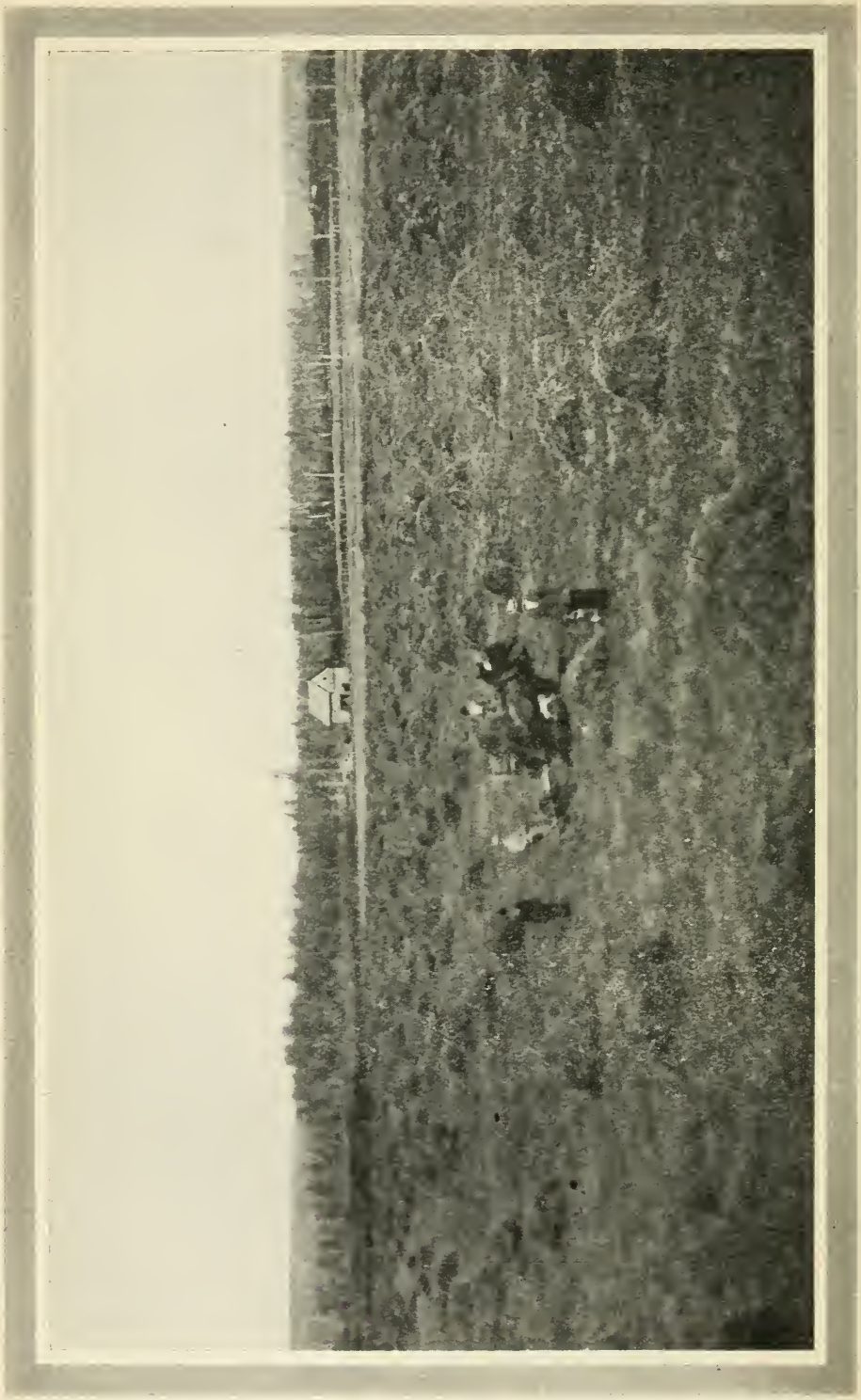
45 road locomotives.
4 switching locomotives.
2 private cars.
2 business cars.
13 first-class wooden coaches.
6 first-class steel coaches.
14 second-class wooden coaches.
4 second-class steel coaches.
2 combination wooden second-class and baggage cars.
1 combination wooden first-class and baggage car.
1 exhibition car.
3 parlor cafe cars.
5 wooden baggage and express cars.
4 steel baggage and express cars.
5 wooden mail and express cars.
3 steel mail and express cars.
26 conductor's vans.
9 stock cars.
143 box cars.

90 steel underframe flat cars.
351 wooden flat cars.
12 steel drop bottom dump cars.
35 Hart convertible cars.
3 snow plows.
3 snow flangers.
3 right hand ballast plows.
3 left hand ballast plows.
3 centre ballast plows.
2 Jordan ballast spreaders.
1 centre ballast spreader.
2 Ledgerwood rapid unloaders.
1 pile driver.
1 American railroad ditcher.
2 steam wrecking cranes.
3 steam shovels.
2 auxiliary boarding cars.
2 auxiliary tool cars.
2 road department auxiliary cars.
2 crane cabin cars.
2 road cabin cars.
1 pile driver tank car.
8 boarding cars.
6 tank cars for fire protection.

Yours truly,

THOS. ROSS,

Master Mechanic.



Farm of A. W. Skinner, Englehart, Ontario, 1917.

OFFICE OF THE SUPERINTENDENT OF TRAFFIC.

Annual Report, Year ended October 31st, 1917.

During the fiscal year ended October 31st, 1917, the following accidents and derailments occurred, and glad to report we have been free of accidents of a serious nature:

1916.

November 8th, while Ex. No. 123, south, passing M.P. 178½, cars G.N. 50343, and G.T. 46639 derailed. Cause of derailment, broken axle on Great Northern car 50343. Total damage to equipment, $210.00. Damage to track material, labor, repairing and wrecking, $59.00.

November 15th, while train No. 47, north, passing M.P. 136¾, alleged struck and killed calf on public road crossing. Owner, Harry Kerr, Heaslip.

November 17th, while train No. 81, approaching M.P. 70.77 (main line), alleged struck and killed man named Edward Osborne, who was walking on track. Railway exonerated from all liability by coroner's verdict.

November 24th, while Train Baggageman McQuestion straightening baggage in car at Porquis Junction, large commercial trunk alleged fell on right foot, alleged causing contusion of big toe. Resumed duty December 13th.

December 1st, while Extra No. 142, south, passing M.P. 100, alleged struck hand car, alleged fatally injuring Sectionman James Irvine Astels.

December 9th, while brakeman H. W. Wagner, handling way-freight at Wawbewawa, barrel of oil fell and alleged struck left knee, alleged causing same to be bruised. Resumed duty December 18th.

December 9th, while freight trucker Anthony Tremblay, North Bay, trucking heavy steel plate, same alleged slipped causing truck handle to strike him on left side of chest, breaking a rib. Resumed duty December 26th.

December 19th, while fireman Chas. Dominic Romain shaking grates on engine No. 141, at Redwater, shaker bar slipped off shaker, arm alleged coming in contact with considerable force with feed valve on boiler; party alleged receiving injuries to three fingers on right hand. Resumed duty January 25th, 1917.

1917.

January 10th, Mr. James Thompson, manager Monteith Pulp and Timber Co., alleged struck by Train No. 9 (The National) at Homer, alleged sustaining injuries to left hand. No responsibility with railway.

January 17th, while engineer H. Thomas was getting down on turn-table after oiling engine, foot alleged slipped on ice, throwing him backwards into turn-table pit, alleged causing muscles and ligaments in back and neck to be badly strained. Resumed duty April 2nd.

February 3rd, while brakeman R. T. Connell was bringing engine No. 103 from round house at Englehart, to place on train on track No. 4, riding pilot of engine, alleged struck brake beam in centre of track, which had fallen from freight car, alleged injuring all toes on left foot, necessitating amputation, also slight bruise on right hip. Resumed duty June 5th.

February 7th, while Extra No. 144, south, passing four rails south of Boston Creek trestle, cars G.T.P. 308400 derailed, also derailing following cars: T. & N. O. 60023, 60172; N.W. 20570, C.N.W. 138676, I.C. 46129, C.N.W. 114746, P.R.R.

162659, C.P. 34300, C.C. & St.L. 69249, C.N.W. 104739, G.T.P. 309766, C.P. 71026, P.R.R. 196921. Cause, broken rail. Total damage to equipment, $525.00.

February 16th, while yardman William Lionel Tracey coupling yard engine No. 150 to first-class coach No. 232 in North Bay Junction yard, was alleged crushed in abdomen, due to drawbar on engine slipping past coupling. Resumed duty March 12th.

February 25th, while No. 97, engine No. 144, north, passing one pole and a half north M.P. 222, car D.T. & I. 51544, alleged derailed. Cause, broken truck on derailed car.

March 13th, A. J. Jackson, passenger, alleged fell into excavation in front of station, Porquis Junction, alleged injuring hip.

March 19th, while Train No. 51, passing two poles east of South Porcupine station, alleged struck and killed pig. Owner, John Hurly, South Porcupine.

March 21st, while brakeman Geo. Fleury unloading way-freight from G.T. 11605 at Haileybury, alleged stepped on nail protruding from piece of board, nail alleged penetrating foot. Resumed duty April 2nd.

March 31st, Bert Coughlin, age 14, alleged killed, Ramore, while attempting to jump off train No. 1 while in motion. Railway exonerated from all liability by Coroner's verdict.

April 1st, while Extra No. 145, north, passing M.P. 7.7, G.T. 59101 alleged derailed, also derailing following cars: G.T. 59127, B. & S. 1546 and 10249, C.P. 270182. Estimate damage to equipment $100.00. Damage to track material, labor, $64.92. Cause, account portion of brake shoe falling between switch joint and rail, becoming wedged in, spreading switch point slightly.

April 8th, while Train No. 85, passing M.P. 95¾, I.O.X. tank car No. 1293 derailed. Estimate damage to equipment, $50.00. Estimate damage to track material and labor repairing, $110.04. Cause, broken journal.

April 9th, while Engine Extra No. 101, west, approaching Leeville, pony trucks alleged derailed, causing engine to run into west end of Leeville siding, damaging front end of engine, breaking draw bars T. & N. O. 60317 and 60563. Cause, account snow and ice. Approximate damage to equipment, $100.00.

April 9th, while operator H. R. Switzer, Latchford, on his way to resume duty, alleged slipped on ice, falling, tearing cords at elbow of right arm. Resumed duty April 23rd.

April 14th, while Extra No. 143, south, passing between Wye switches north end New Liskeard yard, B. & M. 48708 derailed. Estimate damage to track material and labor, $45.20. Estimate damage to car, $60.00. Cause, broken journal.

April 22nd, while switching North Bay Junction yard, engine No. 153, while pushing cars up through No. 20 for rip track, side swiped G. T. 18752, with C.P. 142450. Estimate of damage to equipment, $65.00. Responsible employees disciplined.

April 23rd, while Frank LaFlamme, freight trucker, trucking, North Bay, truck roll of wire, weight of same alleged shifted canting truck, alleged jamming left hand and tearing middle finger. Resumed duty April 30th.

May 12th, while Extra No. 141, south, passing M.P. 196, alleged derailed cars C.G.R. 250632, 260248; I.C. 62105 and 60265. Estimate damage to track material and labor, $108.78. Estimate damage to equipment, $675.00. Cause, unknown.

May 21st, while Train No. 1, passing M.P. 128, alleged struck and killed mare. Owner, Wm. Pollock & Son, Englehart.

May 30th, while trucker Sam Marantjis, Cobalt, loading freight from wagon into freight car, teamster was throwing four rolls of roofing from wagon into car, one of them alleged pitched onto Marantjis, alleged spraining foot. Resumed duty June 13th.

June 22nd, while brakeman Nathan Pringle walking across top of cars, Train No. 97, at Dane, alleged fell from top of coal car while same in motion, alleged dislocating shoulder and injuring tissue. Resumed duty July 30th.

June 23rd, while Train No. 9 (The National), passing six poles south M.P. 206, alleged struck and killed one-year-old steer. Owner, Geo. Burton, Matheson.

June 23rd, while Extra No. 146, south, passing north switch of crossover, Latchford, alleged derailed I.R.C. 62313. Cause, sharp flange on wheel. Estimate damage to track material and labor, $57.67.

June 26th, while fireman Chas. Empie shaking grates on engine, Porquis Junction, foot alleged slipped causing him to fall, alleged striking side on door stand, fracturing rib on left side. Resumed duty July 30th.

June 30th, while Extra No. 144, north, passing M.P. 227, alleged struck Arthur Smith, lying on track in alleged intoxicated condition. Alleged injuries consisted of broken arm and bruised hip. Railway exonerated from all liability.

July 28th, while Train No. 81, passing Kenney, alleged struck and killed three pigs. Owner, Mr. Grier, Kenney.

July 30th, while Stephen Powers, employee of the Baldwin Mining Co., assisting in unloading car T. & N. O. 60059, lumber, at M.P. 167¼, stake alleged gave way, lumber falling on him, causing fatal injury. No responsibility with the railway.

August 3rd, while No. 83, approaching north switch, South Gillies, car B. & S. 11346 derailed, also derailing S.S.W. 20152, C.C. & St.L. 6754, Ill. Cent. 47160, Penn. 580788, P.M. 42849, B. & S. 11492 and 11486. Cause, breaking of intermediate arch-bar, west side leading truck B. & S. 11346. Estimate damage to equipment, $1,375.00. Estimate damage to track, material and labor, $575.00.

August 10th, while Train No. 9 (The National), passing through Matheson, alleged struck cow, breaking hind leg. Owner, Frank L. Roberts, Matheson.

August 12th, while Extra No. 141, passing two poles north of watertank, Matheson, alleged struck and killed horse. Owner, Walter Monohan, Matheson.

August 21st, while Extra No. 132, south, passing over north switch, Temagami, pony truck wheels on engine No. 132 mounted on switch point, alleged derailing engine and leading truck of tender. Cause, due to switch point being worn and chipped. Estimate damage to engine, $230.00. Estimate damage to track, material and labor, $101.90.

August 26th, while Train No. 9 (The National), passing through Matheson, alleged struck and killed cow. Owner, D. C. Johnson, Matheson.

September 2nd, while No. 10 (The National), passing ten poles south M.P. 246, alleged derailed G.T.P. refr. 6027. Cause, unknown. Estimate damage to track, $150.00.

September 8th, while Train No. 34, passing M.P. 1½, Iroquois Falls Branch, alleged struck horse, breaking hind leg. Owner, Mr. Beatty, Porquis Junction.

Sept. 17th, while Extra No. 142, north, passing through Otter, alleged struck and killed pig. Owner J. Dubois, Otter.

September 17th, while brakeman A. Irvine, getting down from engine, alleged sprained ankle. Resumed duty October 1st.

Public School, Haileybury, Ontario, 1917.

High School, Haileybury, Ontario, 1917.

October 6th, two cows alleged struck and injured, five poles north M.P. 71. Owner, Mr. J. Derosier, Temagami. Train unknown.

October 11th, while Extra No. 115, east, passing M.P. 32¾, Porcupine Branch, alleged struck and killed cow. Owner, Joe. Sheridon, Timmins.

October 9th, while Train No. 23, passing M.P. 5¾, Charlton Branch, alleged struck and killed steer. Owner, Mr. Thomas Brennan, Charlton.

October 18th, Mr. C. A. Trudell, passenger, No. 1, en route to Matheson, alleged fell off train M.P. 181¼, alleged injuring back. Commission exonerated from all responsibility.

October 20th, while Extra No. 143, south, passing M.P. 2, alleged struck and killed horse. Owner, Wm. Milne & Sons, Trout Mills.

October 20th, while Extra No. 130, west, passing M.P. 8½, Porcupine Branch, alleged struck and killed cow and calf. Owner, Geo. Vallier, Connaught.

October 27th, while train No. 47, passing road crossing M.P. 106¼, alleged struck horse and rig, alleged killing horse. Owner, Mrs. J. P. Jean, North Cobalt.

October 31st, while Extra No. 141, west, passing crossing west of Schumacher Station, alleged struck wagon, damaging same beyond repair. Also alleged slightly injuring Andre Roy of Timmins, who was in charge of team.

During period under consideration a few employees received minor injuries while in Commission's employ, but none of a serious nature, and same are contained in reports of District Physicians herein.

Time-Table Changes.

Necessary time-table changes have been made to meet summer and winter traffic requirements:

Time-table No. 35, effective February 11th, 1917. Time-table No. 36, effective March 4th, 1917. Time-table No. 37, effective June 24th, 1917. Time-table No. 38, effective September 30th, 1917. Current Time-table shows Trains Nos. 1 and 2, daily except Sunday, between North Bay and Cochrane. These trains are equipped with Standard C.P.R. sleeper, and inter-line service via Canadian Pacific Railway to Montreal, Que. Trains Nos. 46 and 47, daily, except Sunday, between North Bay and Englehart, with inter-line service, via Grand Trunk Railway to Toronto. Trains Nos. 9 and 10 (National), tri-weekly, between North Bay and Cochrane, with inter-line service, via Grand Trunk Railway to Toronto, and Canadian Government Railways to Winnipeg, Man. Equipment of these trains consists of colonist and sleeping cars, electric-lighted first-class coaches, tourist sleeping cars, dining cars, and Standard sleeping cars. Trains Nos. 50, 51, 54 and 55, daily, except Sunday, between Timmins and Porquis Junction, conencting with main line trains. Trains Nos. 52 and 50, daily, except Sunday, between Timmins and South Porcupine. Trains Nos. 56 and 57, Wednesdays and Fridays, only, making connections at Porquis Junction with No. 9, "The National." Trains Nos. 30, 31, 32 and 33, daily, except Sunday, and Trains Nos. 34 and 35, Wednesdays and Fridays, only, between Iroquois Falls and Porquis Junction, connecting with main line trains. Trains Nos. 60 and 61, daily, except Sunday, and Nos. 62 and 63, Wednesdays, only, between Elk Lake and Earlton Junction, connecting with main line trains. Train No. 4, daily, except Saturday and Sunday, between Englehart and Cobalt, and Train No. 6, Saturday, only, Englehart to Cobalt. Trains Nos. 23, 24, 25 and 26, daily, except Sunday between Englehart and Charlton, connecting with main line trains.

Herewith reports Dr. A. McMurchy, District Surgeon, North Bay; Dr. J. S. McCullough, New Liskeard; Dr. R. C. Lowrey, Englehart; Dr. Geo. Cooper, Elk Lake; Dr. H. H. Moore, Timmins, and Dr. J. W. Fraser, Cochrane.

REPORT OF DR. A. McMURCHY.

I am pleased to have to report that, during the year ending October 31st, 1917, there has been a remarkable freedom from accidental injuries among the employees. There have been only two cases causing prolonged loss of time—one, a machinist, severely scalded over the thigh—still under treatment and progressing favorably. The other was a section foreman, who was severely burned on the leg—made good recovery. There were a number of minor accident cases, causing loss of time to the workmen for short periods.

REPORT OF DR. J. S. McCULLOUGH.

I beg to submit herewith annual report for this district for the year ending October 31st, 1917:—

Medical Cases.—During the year there were 208 office consultations with medicine, and 192 town and hospital visits. Medical cases treated were all of a minor nature. There were 15 visits out of town.

Surgical Cases.—Included under this head were two cases of a serious nature—one with a compound fracture of the femur and a fractured skull; died one hour after admission to hospital. The other, a case of amputation of all toes of the left foot, made a good recovery with a useful foot. The other cases were of a minor nature, including fractured fingers and toes, sepsis cuts and bruises, with good recovery.

REPORT OF DR. R. C. LOWREY.

I present to you herewith annual medical report for this district:—

Surgical Cases:

Crushed foot	2
Frozen foot	1
Fractured ankle	1
Lacerated leg	1
Burns	1

There were also a number of minor injuries, such as slight cuts, bruises and sprains.

Medical Cases:

Rheumatic fever	1
Pneumonia	1
Bright's disease	1

Besides above, a large number were treated for tonsilitis, bronchitis, muscular rheumatism, dyspepsia and other minor ailments.

Public School, Cobalt, Ontario, 1917.

Public School, New Liskeard, Ontario, 1917.

REPORT OF DR. GEO. COOPER.

Since July 1st have treated as follows:—

Broken arm	1
Scalp wounds	2
Pneumonia	2
Bronchitis	15
Tonsilitis	5
Measles	15
Whooping cough	28
Intestinal ailments	32

REPORT OF DR. H. H. MOORE.

I beg to report for the year ending October 31st, 1917, the following cases of accidents and sickness among the employees of the T. & N. O. Railway on that part of the line between Timmins and Iroquois Falls:—

Nature of Illness.	Accident.	Sickness.
Frost bites	1	..
Cuts	2	..
Bruises	3	..
Hernia	1	..
Sprains	5	..
Scald	1	..
Colds	..	53
Bronchitis	..	6
Grippe	..	10
Whooping cough	..	7
Eczema	..	1
Debility	..	4
Bright's disease	..	1
Gastro-intestinal	..	12
Tonsilitis	..	4
Neuralgia	..	4
Conjunctivitis	..	1
Intestinal worms	..	1
Constipation	..	2
Appendicitis	..	1
Stomatitis	..	1
Earache	..	1
Infected lip	..	1
Quinsy	..	1
Broncho-pneumonia	..	1
Migraine	..	1
Myalgia	..	2
Diarrhœa	..	5
Carbuncle	..	13
Hæmorrhoids	..	1
Pelvic inflammation	..	2
Urticaria	..	1
Hiccough	..	1

REPORT OF DR. J. W. FRASER.

I beg leave to submit the following report for year ending October 31st, 1917:

Fractured humerus	1
Fractured clavicle	1
Crushed foot	2
Abscesses	6
Injuries to hand	3
Rheumatism	2
Pneumonia	2

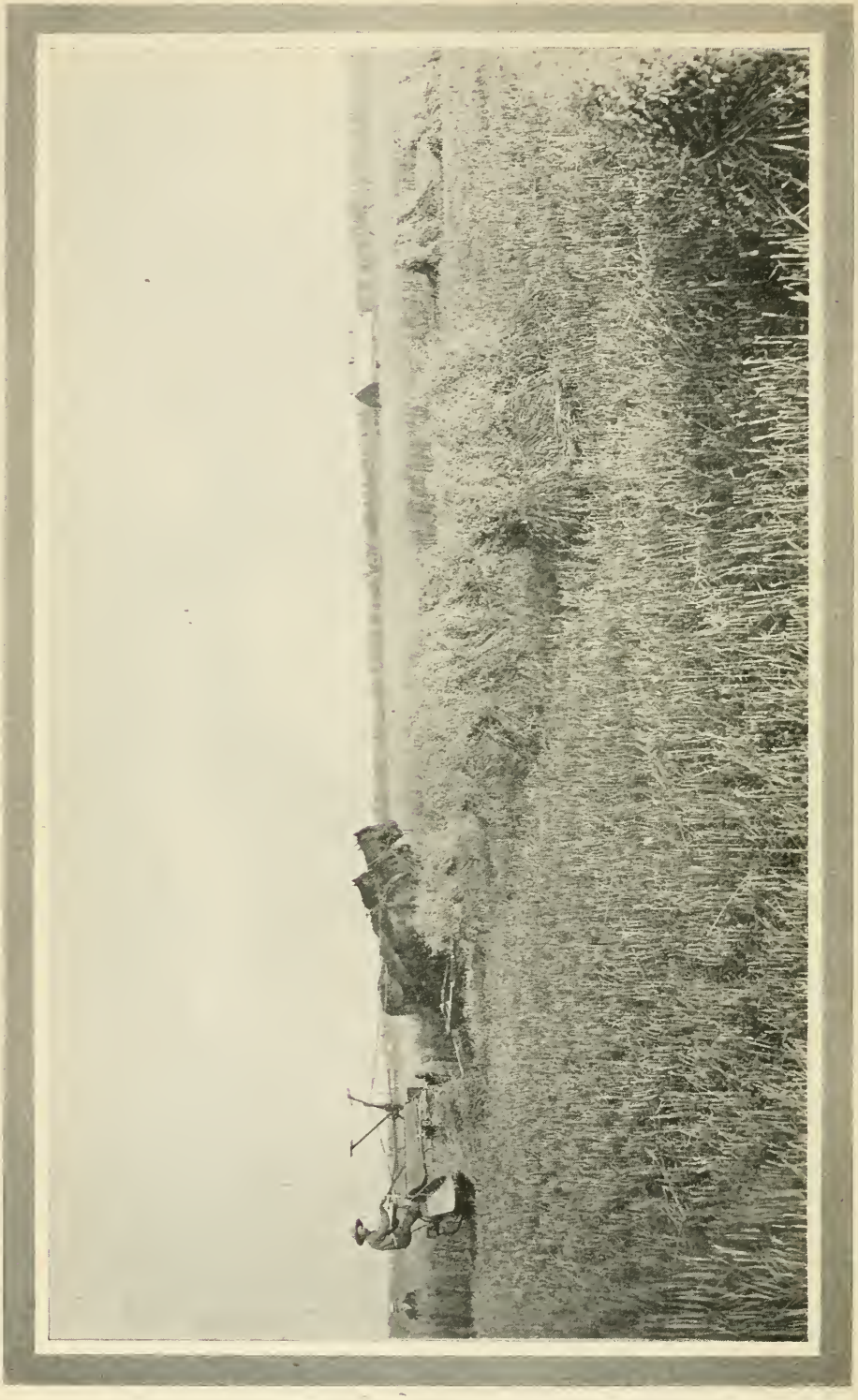
There were also innumerable cases of influenza, bronchitis, gastritis, as well as other minor medical and surgical conditions.

Account traffic conditions, effective June 19th, 1917, Porcupine Station closed. On June 20th, 1917, Connaught Station was opened as an agency point.

Respectfully submitted.

W. A. GRIFFIN,

Supt. of Traffic.



Reaping Oats, 80 bushels to acre, on farm of Mr. J. R. Philips, Milberta, Ontario, September, 1917.

ANNUAL REPORT TELEGRAPH AND TELEPHONE DEPARTMENT.

During the fiscal year ending October 31st, 1917, both telegraph and telephone business held up exceedingly well.

A local telephone circuit was strung from Mileage 37.7 to Mileage 45.5 during the latter part of 1916, to give the different lumber camps connection with Diver, at which point a switching office and pay station was installed. Telegraph office was installed at Diver for the winter months while shipments of logs were being made from that point.

On May 1st, 1917, telegraph wire leased to Messrs. Kiely, Smith & Amos, brokers, was discontinued, Cobalt to Timmins, and new agreement entered into with that firm for circuit, North Bay to Cobalt.

During the year thirty-nine subscriber's telephones were installed and ten removed. Public telephone offices were opened at Wawbewawa, for benefit of the settlers and at Doherty for the Port Arthur Construction Co. Telegraph office at Porcupine was closed and instruments transferred to Connaught, which was made a railway and commercial telegraph agency.

General repairs were made over entire system and lines maintained in first-class condition.

Regret to report that on June 1st our telephone inspector, Mr. L. M. Ferguson, was electrocuted and instantly killed at Boston Creek, by coming in contact with a high power transmission line at that point.

The only serious interruption of service occurring during the year was on March 27th, 1917, when all telegraph and telephone communication north of Englehart was cut off by heavy sleet storm. Prompt action was taken and temporary repairs made, restoring normal connections. Permanent repairs were made later in the summer and the pole lead in Englehart yard was entirely rebuilt.

The following is a statement of commercial telegraph and telephone business handled:—

Local messages handled	39,446
Conjoint messages handled	83,605
Total	123,051
Cable messages sent	419
Cable messages received	129
Total	548
Cable words sent	7,486
Cable words received	2,102
Total	9,588
Telephone calls handled	58,839

Below is a summary of telegraph and telephone wire in operation October 31st:

Kind.	Gauge.	Use.	Mileage.
Iron	No. 8 B.W.G.	Telegraph	1,670
Iron	No. 12 B.W.G.	Long Distance Telephone	167
Iron	No. 12 B.W.G.	Local Exchange and Party Line	247
Copper	No. 9 B. & S.	Telephone Train Despatching	574
Copper	No. 10 B. & S.	Long Distance Telephone	646
Copper	No. 12 B. & S.	Long Distance Telephone	228
Style B.	Twisted pair	Local Exchange	41,000 ft.
		Total Wire Mileage	3,532
		Total Pole Mileage	341

All of which is respectfully submitted.

W. J. Kelly,

Supt. of Telegraph and Telephone.

GENERAL FREIGHT AND PASSENGER DEPARTMENT.

Annual Report, Year ended October 31st, 1917.

The traffic handled during the fiscal year ended October 31st, 1917, shows the following comparison as to tonnage and revenue with that handled during 1916:—

Tonnage, 1917	960,714	Revenue	$1,459,459 93
Tonnage, 1916	922,618	Revenue	1,320,569 33
Increase	38,096	Increase	$138,890 60

There was a large decrease in the movement of all rail grain during the winter of 1916 and 1917 as compared with the previous winter, due entirely to the shortage of empty cars, but this decrease was more than offset by a large increase in the movement of dressed meats and packing house products and manufactured goods.

This increase is largely due to the increasing popularity of the "Transcontinental Route" in the movement of all kinds of traffic between the east and the west.

There was also a large increase of tonnage in coal due to increased activities in the mines, also, to the requirements of the paper and pulp mills at Iroquois Falls and at Metagami on the C.G. Rly.

Lumber, pulpwood and other forest products also show a large increase over shipments for the previous year.

The shortage of cars has seriously hindered the movement of freight, but it is hoped that the Canadian Railway Association for National Defence, recently organized, will be able to take such action as will relieve this situation.

Passenger traffic handled for the fiscal year ended October 31st, 1917, as compared with the year previous, shows the following result:—

Passengers carried, 1917	499,759	Revenue	$655,127 58
Passengers carried, 1916	485,759	Revenue	624,808 12
Increase	14,000	Increase	$30,319 46

While local passenger traffic has been keeping up well, this increase is largely due to through traffic handled on the "National" trains Nos. 9 and 10, between Toronto and Winnipeg. This service continues in popular favor and it is hoped results will soon warrant the running of these trains daily instead of tri-weekly as they are at present.

A. J. Parr,

General Freight and Passenger Agent.

Threshing Alsike, 100 bushels, on farm of Mr. Roy Pacey, two miles from Milberta, Ontario.

OFFICE OF THE COMMISSIONER.

Annual Report for Year ended October 31st, 1917.

GEO. W. LEE, COMMISSIONER.

The financial year of the Temiskaming and Northern Ontario Railway—November 1st, 1916, to October 31st, 1917—has, in every respect, been a very successful year. The territory served by us has, also, been very prosperous—grain and vegetable crops have been good and the cut of timber from the forests large.

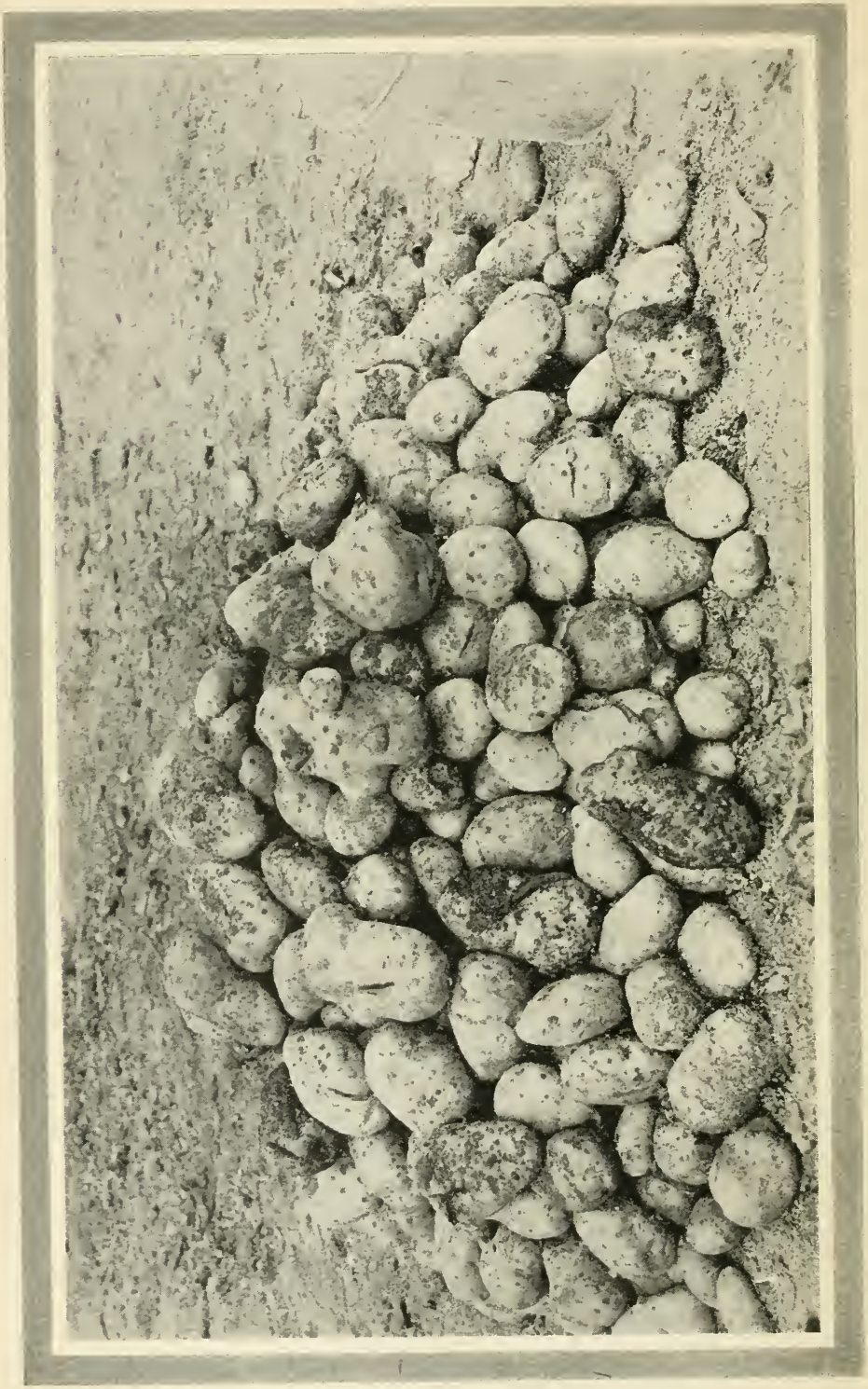
An increased acreage of grains and vegetables has been sown and has resulted in a good average crop of everything planted. There has been a very heavy crop of hay, good crop of oats, fair crop of spring wheat and nearly the average (for this district) of peas. The crop of peas has been much better than grown elsewhere in Ontario. The potatoes and other vegetables are excellent. The crop of vegetables is very largely in excess of that formerly grown in the district, owing to the very general effort of our people to increase production. Many of our settlers and citizens have had a vegetable garden this year for the first time—perhaps in their lives—and their success in gardening has been remarkable. We had the ploughing done for our employees who were unable to have it done themselves and our endeavours have met with great success.

Forests.—The largest cut of pulpwood in our history has and is being made, and this is to the advantage of the settler more than ever. The demand has been without limit and the prices up to more than double that of any former year, with the result that the largest amount of wood, in any one year, will come out this year. This wood will go to the many pulp and paper mills in Canada and the United States. Many of those mills have representatives residing in the district and they are financing the operations of cutting, loading and hauling the wood from the tree to the track. This permits the poorest of our settlers enjoying all the advantages accruing from the bush on their farms as fully as those who are financially better off. In many cases the middleman has gone and we hope for good. It is greatly to the settlers' advantage to deal direct with the company's agent.

There are many rossing plants in the district that are being operated the year round, furnishing work to the capacity of hands that may be had to prosecute the work. The output from individual rossing plants will run into thousands of cords each and the total from the combined plants into the hundreds of thousands of cords of pulpwood.

In addition to the above we have the large paper mills at Iroquois Falls and those in the course of construction at Smooth Rock Falls (the latter are nearly completed) in which several hundred thousands of cords of wood are being converted into paper yearly. The paper manufactured and made ready for the newsprint is being used in all the great dailies of Canada and United States. The paper is of such a superior quality, owing to the superior class of timber used (and only grown in Northern Ontario) that it is steadily displacing the paper of other mills not using our wood.

The sale of Crown Lands during the year ended has not equalled the sale of former years. This is largely attributed to the war conditions—many of our young men at the front doing their bit—and the fact that wages are so high that men find remunerative employment so good that it attracts them away from the land. There have, however, been many farm properties with improvements that have changed hands, the purchasers usually being men of ample means



Pile of Potatoes grown on a town lot in North Cobalt, Ontario, 1917.

and sound judgment, and they realize the value of the Temiskaming lands; as possibly the pioneer settler who located the lands and sold, failed to realize the value. However, the prices realized were good, and mutually the exchange, no doubt, will be beneficial both to the immediate parties as well as the district.

Labor is and has been scarce. Wages are high and the people of the district were never so well off in our history. There has not been as much land put ready for cultivation during the year as we might have hoped for, but likely the cause has been the demand for pulpwood and the prices paid for it. This has had the effect of keeping the settlers cutting wood rather than clearing land. Ultimately it will work out to the advantage of the district, as with the merchantable timber harvested and out of the way greater progress will follow in years to come in clearing and cultivation.

The fire sufferers of 1916 have been, through the generosity of the Government, largely reinstated on their farms again and many in as good a position as previous to the fire. Many farms in the older sections have had erected, during the year, fine farm buildings, such as bank-barns, stables, etc. Much improved stock has been brought into the district during the year, including horses, cows, sheep, swine as well as large quantities of poultry. The grasses of the district have furnished abundant pasturage for the stock and the district has a show of grass, with winter setting in, that one will not see in any other part of Canada.

During the year there has been a creamery established at New Liskeard, which has been well patronized and very successful. It is the first of its kind in the district and there is reason to hope for the installation of others at various points in the near future.

During the year we, at the suggestion of one of our employees, looked into the question of tie preserve for the railway. A thorough investigation was made and, as a result, the Department of Lands, Forests and Mines have set aside four townships for the Temiskaming and Northern Ontario Railway. It is estimated that there are 2,500,000 ties on this property and, with proper management, which it is purposed shall be given to this project, we should have a continual supply of ties.

We are glad to note that the Government are going about it in the right way to settle returned soldiers in the country served by us. We have faith and believe it will be a success beyond all doubt and, in our judgment, we cannot have too many of our heroes in the Great Northland.

During the year we have been highly honored by a visit to our country—"Greater Ontario"—by Their Excellencies The Duke and Duchess of Devonshire and family. Feel that this visit will be something we will all remember and look back upon as one of the pleasant remembrances in connection with the development and progress of the Greatest Country on earth.

In conclusion we have the faith in the country and this, combined with works, a glorious future is assured and success will come to all.

View of part of Town of Cobalt, Ontario, 1917.

Preliminary Report on the Mining Industry in that part of Northern Ontario served by the Temiskaming and Northern Ontario Railway, Calendar year 1917

By ARTHUR A. COLE, Mining Engineer

The mining industry in the Temiskaming District has had a fairly prosperous year. While gold and silver, the two principal metals produced, will each show a reduction in the actual ounces produced, the increased value of silver will more than offset the difference and the gross value of the output of these metals will be $25,000,000, an increase of $2,000,000 over the previous year.

In order to meet the increased cost of living, wages have been increased in both the gold and silver camps, in the gold camp by a raise in the basic wage and in the silver camp by a bonus which varies according to the price of silver.

Last year many of the mines ran very short of fuel during the coal famine, but this winter, profiting by last year's experience, a good supply has been stored ahead.

In both the gold and silver areas new finds continue to be made and, wherever promising, capital is readily forthcoming for their development.

GOLD.

The statistics of Ontario's gold production for the first nine months of the calendar year, issued by the Ontario Bureau of Mines, are as follows, with figures for the corresponding period of 1916 for comparison:—

	Quantity, ounces.	Value.
1916	363,955	$7,513,734
1917	343,490	6,754,535

Porcupine:

The gold production of the Porcupine camp for 1917 will amount to approximately $9,000,000, and comes from the following mines:—

Hollinger.	Vipond-North-Thompson.
McIntyre.	Schumacher.
Dome.	Dome Lake.
Porcupine Crown.	Newray.

With the continued high cost of supplies and the increase in the cost of labor, the cost of producing gold has materially increased. This particularly affected the Dome mine, so that towards the end of the year the directorate of this property decided to close the mine until working conditions were more favorable. Now the mill is closed down and the only work that is being carried on is the sinking of a shaft to the 1,500 ft. level by contract.

The favorable deep developments in the McIntyre and Hollinger Mines, as well as the information gained by diamond drill cores at a depth of 1,400 feet tend to show that the ore at depth is of the same character as higher up, and all these indications point to the probability of deep mining at Porcupine.

Outside of the producing mines there have been important working extensions of the camp both north and south. The Ankerite property in Northern Deloro,

belonging to the Coniagas Mines, of Cobalt, has started sinking of a 500 ft. shaft on contract. The Maidens-Macdonald, an adjoining property, has also been bought by the same interests.

Control in the Newray, formerly the Ray property, situated to the north-east of the Pearl Lake group, has been acquired by Crown Reserve and Dominion Reduction interests of Cobalt. This was one of the early discoveries of the Porcupine camp, but owing to mismanagement and lack of sufficient capital, the property was never given a thorough testing out. Recent developments indicate that it is likely to become an important producer in the future. A number of claims in Northern Tisdale are also being opened up and will be given further prospecting development. Other prospecting in the outlying parts of the camp has not yet developed important results.

Kirkland Lake:

This district has been very active during the year, and many new properties have been opened up, extending the probable producing area very materially. The new development has been mostly to the west and south-west of Kirkland Lake. The following is a list of the most active properties at the close of the year, running roughly from west to east:—

Canadian Kirkland.
United Kirkland.
Elliott Kirkland.
Kirkland Lake Gold Mines (Beaver or McCane).
Kirkland Porphyry.
Teck-Hughes.
Lake Shore.
Minniker Gold Mines.
Wright-Hargraves.
Aladdin Cobalt (Burnside).
Tough-Oakes.
Fisher Gold Mining & Milling Company, on the Goodfish Lake road.
Hind Claims.

The only two producers were the Tough-Oakes and the Teck-Hughes. The Teck-Hughes mill has been doubled in capacity, so that it now treats 80 tons per day. The main shaft is being sunk to the 700 ft. level. The Lake Shore has developed an ore shoot containing some spectacular ore on the 2nd level under Kirkland Lake, and a crosscut is now being driven to cut this ore on the 400 ft. level. The Lake Shore mill, with a capacity of 75 tons per day, is expected to be ready to start operations by February 15th, 1918.

The Kirkland Lake Gold Mines are sinking a central shaft to the 700 ft. level. The foundation for their mill is now complete and the mill is expected to be ready by next June.

The Kirkland Lake Porphyry Company also plan a mill for 1918.

Favorable deep developments on the operating properties, particularly on the Kirkland Lake, Teck-Hughes and Lake Shore properties, are of a most encouraging nature and indicate that further extensions to the producing zone are likely to be found extending to the west and south-west of the present operators around Kirkland Lake.

Munroe:

After the devastating fire of the summer of 1916, the Croesus Mine replaced its plant and rebuilt its mill. The mill was ready for operation in the spring of 1917, but owing to water troubles in the mine the mill has not been operated

continuously. The mill has a thirty to forty ton daily capacity, but the company still ships high-grade hand sorted ore.

A small plant is being taken into a group of claims one mile south-east of the Croesus, where a company (Buff Munroe) already has a shaft down fifty feet.

Boston Creek:

The Boston Creek and R.A.P. Syndicate, near Boston Creek station, has been idle during the year on account of litigation.

The Miller Independence produced a little gold and the Patricia Syndicate started development and already has a shaft down eighty feet.

McElroy:

The Kerr Lake Mining Company has an option on the Mondeau Claims and is taking in a small development plant.

Skead Township:

Several properties are doing development work and one small plant has been installed.

Bourkes:

The Bourkes Mines, Limited, situated near Bourkes station, in the Township of Benoit, have installed a small plant and have disclosed some spectacular ore in development.

The Murray-Mowgridge, on the shore of Wolfe Lake, east of Bourkes station, is now developing with a small plant. Their shaft is down 226 feet and development is proceeding on the 50, 100 and 200 ft. levels.

Rickard Township:

The original find in this Township has been acquired by the Mining Corporation of Canada. Camps are now being erected and shaft sinking has been started by hand. A plant for this property is now at Iroquois Falls.

Lightning River:

The Lightning River district is reached either from Ramore Station or by a thirty mile bush road from Kirkland Lake. A very promising find is said to occur in a quartz vein, varying in width from one to five feet.

Larder Lake:

A little activity has been restarted by the Associated Gold Fields, Limited, in this district.

Powell Township:

The Davidson and Otisse claims, which caused the rush into Powell Township last winter, had very little work done on them during the year. Supplies are now going in for next summer's work.

High Grade Ore at Cobalt, Ontario ; $20,000 in these blocks.

"The Golden Sidewalk," Big Dome Mine, in Porcupine District.

SILVER.

Cobalt Camp:

The official returns for nine months' production of the year, with the figures for the corresponding period of the previous year, are as follows:—

	Quantity, ounces.	Value.
1916	16,203,091	$9,750,040
1917	15,236,002	12,001,875

Shipments for the last three months of the year averaged about the same as the first nine months of the year, which would make the value of the year's shipments $16,000,000. For the first seven months of the year the price averaged about 75c. Then a rise started which reached its maximum on September 25th, the price on that day being 108.50c. The average price for September was 100.74c., but since that time it has averaged near 85c. This high price of silver has stimulated the Cobalt mines to further development, and much ore that was formerly too low grade can now be treated at a profit. The rise in price, in conjunction with the installation of the flotation process, is also responsible for the preparation to retreat much of the old mill tailing material.

An agitation was started in Cobalt in connection with the flotation process, in order to have the Government take action in settling a reasonable royalty payable by the mines for the use of any oil flotation process. On account of the heavy litigation that had taken place in the United States in this connection, mining companies were often averse to installing flotation plants, fearing a repetition of this costly litigation. This was retarding production. The Dominion Government has promised to take action and see that a reasonable royalty is fixed, and as soon as this is done a further impetus will be given to production at Cobalt.

Negotiations are now under way between the British and United States Governments looking toward the fixing of the price of silver for a period of two years, and the price most frequently spoken of in this connection is 86c. The fixing of this price for a definite period of time will help to stabilize the industry, and as such will work out as a benefit to the industry in the long run.

In the early days of the Cobalt camp a small allowance was made to shippers for ore containing a cobalt content of from 6 per cent. up. Then for some time no allowance whatever was made for the cobalt contents of the ore; but, recently, the demand for metallic cobalt has increased to such an extent, particularly for the manufacture of the alloy Stellite, that the smelters began paying again for the cobalt. Still more recently the demand has become much keener, the reason being that there is a large call for arsenic as well as cobalt, and as cobalt occurs as an arsenide in the ores of the Cobalt camp, the arsenic contents rise with the cobalt and nickel contents.

At present there is a great call in Cobalt for a metallurgical process for the economical treatment of flotation concentrates, and although a considerable amount of investigation has taken place, no satisfactory method of treating this material at the point of production has yet been discovered. Shipments of this material, therefore, continue to the smelters at Denver, although a combined freight and treatment charge of over $24.00 per ton has to be paid.

The following mines were the leading shippers during the year:—

The Mining Corporation of Canada.
The Nipissing.
The Kerr Lake.
The Coniagas.
The O'Brien.
McKinley-Darragh.

Gowganda:

Among the few shippers of silver ore outside of the Cobalt camp proper, the Miller-Lake-O'Brien Mine, of Gowganda, is easily the most important. This property has shipped, approximately, 1,000,000 ounces during the year. The favorable development of last year's spectacular find on this property has revived considerable interest throughout the Gowganda District.

The Reeves-Dobie property shipped five tons of high grade ore and are now preparing their small mill for operation.

The Crews-McFarlan property bagged some ore, and bought the Bartlett during the year.

The Welsh claims have been optioned to the Crown Reserve at Cobalt, and the Hyland claims to the Mining Corporation of Canada. The Morrison claims have been optioned to the La Rose Mining Company.

An investigation has also been started on the Everett Lake Syndicate.

The T. C. 177 Mining Company has a shaft down 100 ft. and is proceeding with development.

A large mineralized zone containing good silver values in parts was located in Corkill Township, about twelve miles south-west of Long Point Lake. This find, which was located on the Kell claims, is now under option to the Kerr Lake Mining Company, of Cobalt.

Casey Township:

Development work continued at the Casey Mine during the year.

South Lorrain:

Small shipments were made during the year from the Wettlaufer and Pittsburgh-Lorrain, and development work continued at the Belle Ellen.

NICKEL.

During the first ten months of the year the Alexo property, near Porquis Junction, on the Porcupine Branch, shipped 4,566.00 tons of nickel ore to the Mond Nickel Company, at Conniston, Ontario.

PYRITE.

A number of enquiries for pyrite were received during the year and some diamond drilling was done on a property at Nellie Lake, but no shipments were made.

BARITE.

The Barite property on Night Hawk Lake, known as the Premier Langmuir, has taken into the property a small plant and a thirty-ton mill, which is to be ready for operation the end of the year. The vein is from four to six feet wide, and carries some high grade silver ore on one wall.

FIRE CLAY.

Captain C. M. McCarthy, of Elk Lake, on a trip to Moose Factory, discovered what may prove to be an important deposit of fire clay on the Mettagami River.

Nipissing Mine, Cobalt.

The Silver Sidewalk at La Rose Mine, Cobalt, Ontario.

LIMESTONE.

Shipments from the Farr Quarry, near Haileybury, continued to be made regularly during the year to the Abitibi Power and Paper Company's plant at Iroquois Falls.

PEAT.

Owing to the recurring shortages of coal in Northern Ontario, an investigation has been started to find out if peat fuel cannot be produced in the district to substitute, in part at least, the imported coal. Samples of peat bogs were sent, during the summer, to the Mines Branch, at Ottawa, and favorable reports received. Mr. A. Anrep, peat expert for the Dominion Government, made a preliminary examination of several of these peat bogs in October, and will later report on the cost of preparing this material for market.

RE STORES DEPARTMENT, PURCHASES AND ISSUES YEAR 1916-17

Submit herewith statement showing purchases and disbursements affecting various stocks during the fiscal year ending October 31st, 1917.

Shop stock purchases show a slight decrease as compared with 1916, but the issues show a decrease of $83,489.63. The difference to a great extent indicates Safety First margins for use in fiscal year 1918, prominent among which are iron and steel bars, tires, and steel plates for locomotive and general repair work. The wisdom of authorizing these purchases is amply demonstrated in the ever increasing prices of such material, and difficulty of obtaining delivery, and especially since the United States have thrown in their lot with the Allies.

Shop stock material of all kinds shows sharp advances during the past year, ranging anywhere from thirty to one hundred per cent. and upwards.

Steam coal has continued to be one of our main concerns during the whole fiscal year, but by the united effort of both Toronto office and stores department, we have been able to close the year without suffering actual hardship at any time, and have, in addition, on hand a reserve that should suffice for from four to five months' consumption—present thought inclining to the latter date—say June 1st, 1918.

In this connection we were fortunate in entering 1916-17 with a favorable contract only partially delivered. Delays in coal delivery have rested mainly with transport rather than contracting companies.

During last winter anthracite coal was difficult to obtain, but in only one instance was a purchase made locally, and that for one ton. We closed the fiscal year with a larger stock on hand than we have had for some years—approximately 1,000 tons.

Purchases of oil and waste do not show much advance over 1916—one of the contributing factors being the existing contract with the Galena Signal Oil Co., which became operative May 1st, 1915, and is still in effect.

The installation of an oil and waste reclaiming process should tend to reduce car lubricating costs. Operations up to the present indicate that 100 lbs. of returned dope will yield approximately 53 pints of car oil, and 34 lbs. of wool waste. The return of old dope to stores cannot be too strongly impressed, and circulars have been issued to departments interested in this connection.

Stationery shows increase in cost in common with other lines.

Scarcity of steel rail continues, as indicated by the small amount of purchases.

which means a serious handicap, not only to the T. & N. O., but all Canadian railways. The demands for war material on the rolling mills is mainly responsible for the scarcity of rails. Heavy rail section has practically doubled in price since the beginning of the war.

Tie prices have advanced and production shows a decrease along the whole line from various causes, viz., depletion of timber supply within easy hauling distance; from forest fires; the high prices for sawn lumber, and also the abnormal price of pulpwood, diverting effort in that direction rather than to making ties.

The reservation of a tie timber area secured by the Commission for tie requirements of the railway marks the beginning of a new era, and is another example of conserving a public natural resource for use by a public utility.

Lumber of all kinds shows a large increase in price, not only in the higher grades, but even more acutely in the lower grades, such as jack and red pine and spruce.

Reclamation of material being placed under control of stores department also marks a new departure. To this end a new building was erected, also, sorting platform and scrap bins extended to facilitate sorting and caring for reclaimed material. These changes involved the transfer of a blacksmith and helper and four laborers to stores payroll.

Accounts *re* reclamation are being kept separate from others with a view to ascertaining costs in this direction. The fullest co-operation of all departments is solicited, with a view to reducing scrap and purchases to the minimum, consistent with safety—a penny saved is a penny gained.

We would characterize the work of the year as "strenuous," not on account of the volume of business so much as the increasing difficulty in securing material and delivery to Stores, and apparently the end is still in the distance.

In closing, hereby express thanks to all departments and the Toronto office, and Commission for many courtesies extended to stores department during the year.

Respectfully submitted,

W. A. Graham,

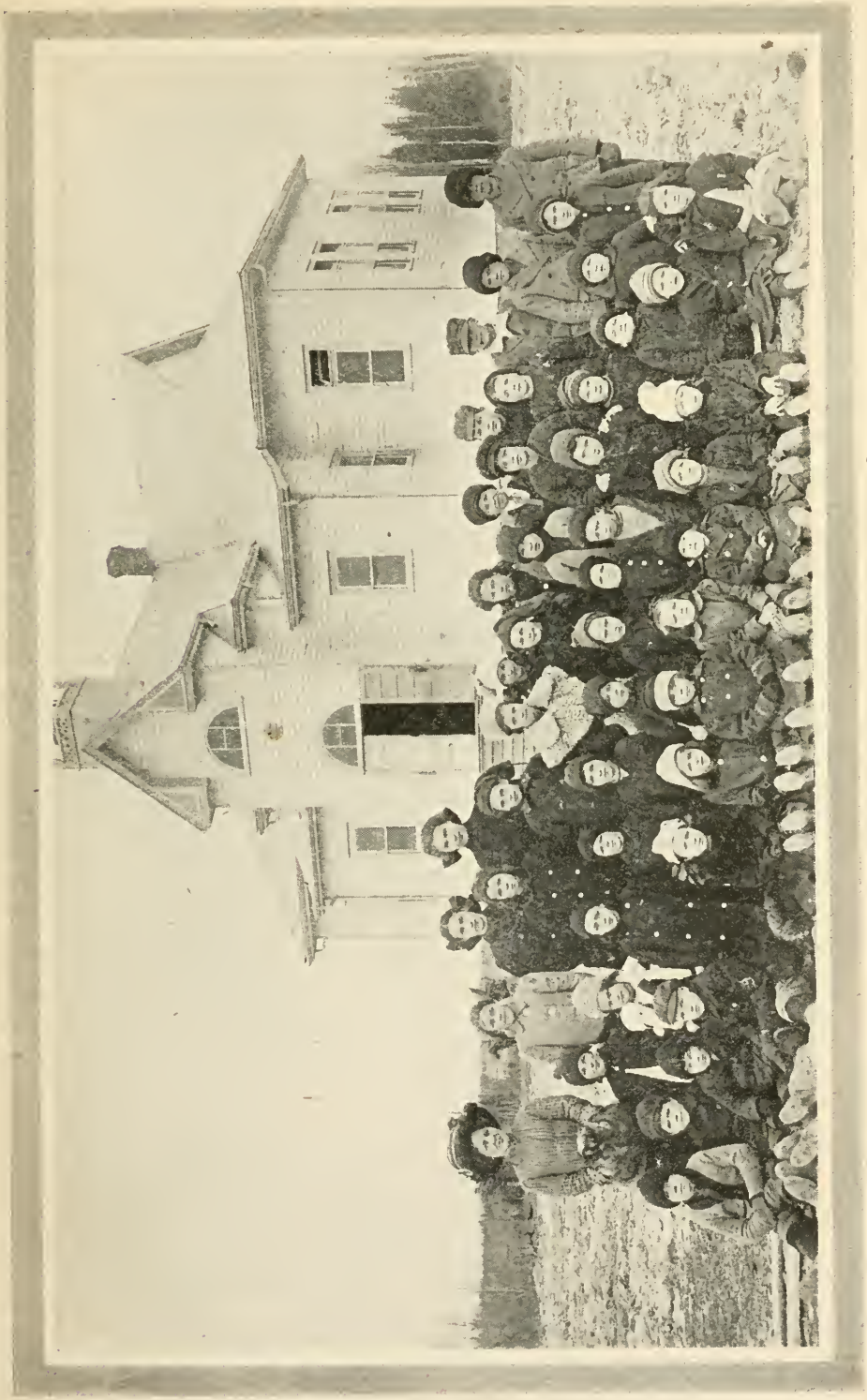
P. A. & Storekeeper.

Purchasing and Stores Department.

Statement of Purchases and Issues, Fiscal Years 1916-1917.

Stock.	1916		1917	
	Purchases.	Issues.	Purchases.	Issues.
	$ c.	$ c.	$ c.	$ c.
Shop	373,985 43	317,216 53	373,467 06	289,977 43
Soft Coal	427,717 32	374,629 07	662,042 84	531,777 50
Hard Coal	9,042 00	10,624 13	17,369 46	14,585 68
Oil and Waste	19,347 33	14,685 14	18,285 92	18,043 58
Stationery	17,598 55	15,867 78	19,052 97	18,673 70
Rail	6,322 30	61,093 59	42,678 53	20,421 49
Ties	18,402 35	31,576 80	29,587 66	23,615 63
Ice	3,894 15	5,941 01	5,469 18	3,875 22
Nipissing Central Railway	10,177 35	8,935 61	25,171 30	14,875 45
	886,486 78	840,569 66	1,193,124 92	935,845 68
Locomotives—six new	204,851 00	204,851 00	.....	.....
	1,091,337 78	1,045,420 66	1,193,124 92	935,845 68

Total Issues	1,045,420 66		935,845 68
Total Purchases	1,091,337 78		1,193,124 92
	2,136,758 44		2,128,970 60
Pay roll	17,374 71		20,203 05



Public School, Charlton, Ontario, 1917.

FINANCIAL STATEMENTS.

Morning's catch near Diver Station, forty miles from North Bay, Ontario.

GENERAL BALANCE SHEET, October 31st, 1917.

ASSETS.

Property Owned:—		
Cost of Road as of Oct. 31, 1916	$18,129,015 07	
Cost of Road for year ended Oct. 31, 1917	168,134 43	
		$18,297,149 50
Cost of Equipment as of Oct. 31, 1916	$2,570,791 71	
Cost of Equipment for year ended Oct. 31, 1917	Cr. 6,879 92	
		2,563,911 79
Investment Nipissing Central Railway		483,123 31
Empire Lumber Co. Plant, Latchford		805 00
Working Assets:—		
Cash—Treasurer	$131,602 55	
Cash—Land Agent	1,897 99	
Accounts Collectible	277,973 40	
Balance due on Townsite Sales	46,478 23	
Agents and Conductors	8,608 95	
Traffic Balances—Freight	47,329 20	
Material and Supplies	568,465 94	
Ballast Pit Operations	46,015 64	
Other Assets	1,379 56	
		1,129,751 46
Deferred Debit Items:—		
Paymaster's Advance	$7,000 00	
Treasurer's Advances	50 00	
Insurance Paid in Advance	805 42	
Surveys	1,460 93	
Accounts in Suspense	279 20	
		9,595 55
		$22,484,336 61

LIABILITIES.

Provincial Loan Account		$21,593,869 99
Working Liabilities:—		
Accounts Payable	$300,632 32	
Traffic Balances—Tickets	12,671 79	
" —Car Service	9,557 90	
Unclaimed Wages	1,495 99	
		324,358 00
Deferred Credit Items:—		
Accrued Depreciation—Equipment	$269,351 32	
Deposits on Sidings	5,218 25	
Deposits on Contracts	1,955 75	
War Tax	829 76	
Material Accounts in Transit	1,428 46	
In Suspense	14,019 44	
		292,802 98
Free Surplus:—		
Profit and Loss—Balance		273,305 64
		$22,484,336 61

PROFIT AND LOSS.

Adjustment Empire Lumber Co. Plant	$3,562 33	By Balance, October 31, 1916	$14,303 61
Loss, retired Road and Equipment	3,183 15	Revenue for year ended October 31, 1917	516,700 56
Uncollectible Accounts—Cancelled	2,878 40	Income from Nipissing Central Railway	2,000 00
Townsites	2,653 29	Townsites Sales	18,853 25
Adjustment Stores Accounts to Inventory	17,610 66	Vouchers Unclaimed—Cancelled	1,336 05
Paid Treasurer of Ontario	250,000 00		
Balance Carried Forward	273,305 64		
	$553,193 47		$553,193 47

STATEMENT OF EXPENDITURE ON CONSTRUCTION.

Fiscal Year Ending October 31st, 1917.

Engineering	$1,870 05
Land for transportation purposes	*Cr.* 8 20
Grading	72,567 40
Bridges, trestles and culverts	10,190 24
Ties	2,570 97
Rails	*Cr.* 399 38
Other track material	11,172 08
Ballast	6,191 60
Track laying and surfacing	6,381 81
Right-of-way fences	877 11
Crossings and signs	854 21
Station and office buildings	16,455 63
Roadway buildings	*Cr.* 7,275 14
Water stations	442 20
Fuel stations	172 46
Shops and engine houses	11,575 10
Telegraph and telephone lines	1,004 86
Miscellaneous structures	13,131 47
Shop machinery	31,545 64
Steam locomotives	*Cr.* 457 60
Freight-train cars	470 84
Passenger-train cars	*Cr.* 4,143 16
Work equipment	*Cr.* 2,750 00
Revision of line	*Cr.* 11,185 68
Total	$161,254 51

DETAILED STATEMENT OF CHARGES TO CONSTRUCTION.

ROAD.

Siding, Mindoka	$625 39
Siding and coal trestle, Swastika	3,790 17
Siding, mileage 153	689 55
Completion station and sidings, Timmins	19,301 49
Siding, Heaslip	652 19
Culvert, trestle, mileage 162.2	5,898 57
Lighting, Iroquois Falls	349 71
Freight shed and platform, Uno Park	1,143 59
Alterations machine shop, North Bay Junction	7,015 82
Plumbing, Iroquois Falls	1,355 84
Plumbing, Porquis Junction	550 31
Culvert, mileage 224.07	723 14
Tenement houses, Iroquois Falls	10,739 44
Section houses, Matheson, Nushka and Nahma	2,411 06
Engine shed, Iroquois Falls	3,114 94
New station, Matheson	10,113 94
Lavatory system, office building and coach shop, North Bay Jct.	701 76
Electric hoist, ice house, North Bay Junction	838 61
Bridge, mileage 181.3	10,723 78
Culvert, mileage 0.5, Porcupine Branch	*Cr.* 720 08
Yard changes, Englehart	594 42
Yard changes, Porquis Junction	543 05
Motor generator set, etc., North Bay Junction	1,575 88
Telephone circuit, mileage 37.7—45.5	211 68
Machine tools, North Bay Junction	29,935 23
Three camp buildings, Cochrane	2,392 03
Lavatory system, agent's house, Uno Park	187 57
Stock pens, Earlton	258 77
Additional weight of rails and fastenings	8,572 11
Transfer track with C. N. R., North Bay Junction	2,526 79
Additional road crossings	863 87
Right-of-way fencing	906 41

Culvert, mileage 30.75	$511 57	
Completion water service, Porquis Junction	21 90	
Completion coaling plant, Porquis Junction	35 30	
Excess cost 10 feet ties	34 32	
Completion freight shed, Cochrane	271 76	
Completion lavatory system, Cobalt	25 84	
Revision of line, M.P. 54-55	8 10	
Revision of line, M.P. 63-66.5	45,103 10	
Revision of line, M.P. 81	77 84	
Oil and waste reclaiming plant, North Bay Junction	1,352 91	
Freight shed and station, Monteith	5,121 68	
Portable stations, Nushka and Kelso	1,044 67	
Shelter station, Leeville	650 08	
Shelter station, Jacinto	237 73	
Freight shed and platform, Bourkes	704 20	
Additional sidings and extension freight shed, Iroquois Falls	5,741 50	
Restaurant equipment, Cochrane	1,509 29	
Improvement station grounds	849 71	
Additional sidings, Porquis Junction	10,440 77	
Additional sidings, Cochrane	1,072 77	
Transfer with C. G. R., Cochrane	5,403 73	
Completion Bachelor section house, Kerr Lake	75 00	
Culvert dock spur, New Liskeard	532 82	
Stores building, etc., repair track, North Bay Junction	3,201 38	
Telegraph loop, Porquis Junction to Iroquois Falls	793 18	
Pump house, Connaught	420 30	
Extra land, North Bay	198 45	
Buildings destroyed and retired ..... *Cr.*	39,848 25	
Track scales, North Bay Junction, retired ..... *Cr.*	1,405 17	
Land along right-of-way sold ..... *Cr.*	227 50	
Sidings installed and removed ..... *Cr.*	4,411 58	
		$168,134 43

EQUIPMENT.

Additional freight cars	$3,695 24	
Equipment destroyed and retired ..... *Cr.*	36,589 67	
Mikado locomotives ..... *Cr.*	457 60	
Betterments, passenger-train cars	1,853 81	
Electric lighting, parlour café cars	4,130 53	
Conductors' vans	20,487 77	
		Cr. $6,879 92
		$161,254 51

COMPARATIVE STATEMENT SHOWING EARNINGS AND EXPENDITURES IN OPERATION

PERIOD 1905 TO 1917, INCLUSIVE.

Year.	Freight.	Passenger.	Other Revenue.	Maintenance of Way and Structures.	Maintenance of Equipment.	Traffic Expenses.	Transportation Expenses.	Misc. Operations.	General Expenses.	Transportation for Investment. Cr.	Total Revenue.	Total Expenditures
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
1905..	121,530 46	108,681 76	23,508 33	25,072 89	12,533 68	.....	88,342 41	.....	13,823 52	.....	253,720 55	139,772 50
1906..	230,552 63	254,759 33	58,706 89	77,265 87	46,382 65	.....	215,256 08	.....	23,194 61	.....	544,018 85	362,099 21
1907..	390,894 29	388,343 03	74,282 69	112,395 22	88,016 79	.....	412,160 52	.....	32,839 76	.....	853,520 01	645,412 29
1908..	471,203 41	366,504 53	135,357 67	125,563 43	119,563 01	12,499 96	405,907 58	.....	24,863 45	.....	973,065 61	688,397 43
1909..	756,141 66	483,110 89	121,972 33	191,170 18	107,078 96	9,789 99	436,768 41	.....	49,989 34	.....	1,361,224 88	794,796 88
1910..	852,886 46	606,967 91	131,997 65	380,314 75	137,340 46	14,920 04	556,740 45	.....	76,045 66	.....	1,591,852 02	1,165,361 36
1911..	974,678 33	653,063 01	153,223 49	353,918 92	164,145 69	17,705 31	567,316 97	.....	78,911 74	.....	1,780,964 83	1,181,998 63
1912..	929,464 66	599,681 73	178,303 68	346,964 01	249,683 22	17,461 22	676,963 33	.....	93,625 91	.....	1,707,450 07	1,384,697 69
1913..	906,476 16	576,049 37	173,629 32	430,820 04	242,633 93	16,857 36	680,480 08	.....	106,758 60	.....	1,656,154 85	1,477,550 01
1914..	952,090 35	544,820 08	173,988 44	408,046 15	284,935 87	18,872 65	651,687 20	.....	105,032 36	.....	1,670,898 87	1,468,574 23
1915..	925,735 37	482,349 80	143,466 60	325,865 86	262,654 51	18,135 13	625,911 92	.....	95,929 49	.....	1,551,551 77	1,328,496 91
1916..	1,320,569 33	624,808 12	192,744 50	349,024 48	248,702 04	22,465 69	842,058 75	42,562 89	91,317 74	1,954 13	2,138,121 95	1,594,177 46
1917..	1,459,459 93	655,127 58	217,318 28	419,266 84	305,286 86	17,676 10	985,452 19	47,824 69	107,255 05	1,465 44	2,331,905 79	1,881,296 29
	10,291,683 04	6,344,267 14	1,778,499 87	3,545,688 64	2,268,957 67	166,383 45	7,145,045 89	90,387 58	899,587 23	3,419 57	18,414,450 05	14,112,630 89

SUMMARY.

Freight Revenue	$10,291,683 04	Maintenance of Way and Structures	$3,545,688 64
Passenger Revenue	6,344,267 14	Maintenance of Equipment	2,268,957 67
Other Revenue	1,778,499 87	Traffic Expenses	166,383 45
		Transportation Expenses	7,145,045 89
		Miscellaneous Operations	90,387 58
		General Expenses	899,587 23
		Transportation for Investment—Cr	3,419 57
	$18,414,450 05		$14,112,630 89

Total Revenue from Transportation	$18,414,450 05
Total Expenditures	14,112,630 89
	4,301,819 16
Other Income, etc	759,731 64
	5,061,550 80
Paid Treasurer of Ontario	4,788,245 16
Balance Profit and Loss	273,305 64

TEMISKAMING AND NORTHERN

Comparative Statement of Earnings and Expenditures

No.	RECEIPTS.	Per Cent.	1915 November	Per Cent.	1916 November
	I. TRANSPORTATION—RAIL LINE:		$ c.		$ c.
101	Freight	.....	97,346 05	.....	110,672 25
102	Passenger	.....	43,433 78	.....	54,927 93
103	Excess Baggage	.....	524 23	.....	397 09
105	Parlor and Chair Car	.....	62 10	.....	43 40
106	Mail	.....	1,952 60	.....	1,952 60
107	Express	.....	4,337 76	.....	5,219 56
108	Other Passenger Train	.....	.....	.....	.....
109	Milk	.....	.....	.....	.....
110	Switching	.....	1,065 87	.....	1,139 89
111	Special Service Train	.....	.....	.....	.....
112	Other Freight Train	.....	.....	.....	.....
	Total	.....	148,722 39	.....	174,352 72
	III. INCIDENTALS:				
131	Dining and Buffet	.....	.....	.....	1,166 61
133	Station, Train and Boat Privileges	.....	362 49	.....	512 50
135	Storage—Freight	.....	131 01	.....	127 82
136	Storage—Baggage	.....	42 65	.....	27 75
137	Demurrage	.....	492 00	.....	1,532 00
138	Telegraph and Telephone	.....	3,659 95	.....	3,292 30
140	Stockyard	.....	.....	.....	.....
142	Rents of Buildings and other Property	.....	1,170 51	.....	1,100 40
143	Miscellaneous	.....	4 25	.....	18 08
	Total	.....	5,862 86	.....	7,777 46
	IV. JOINT FACILITY:				
151	Joint Facility—Cr	.....	.....	.....	.....
152	Joint Facility—Dr	.....	118 18	.....	124 65
	Total	.....	118 18	.....	124 65
	TOTAL REVENUE	.....	154,467 07	.....	182,005 53
	EXPENDITURES.				
1	Maintenance of Way and Structures	23.8	36,819 46	19.	34,470 73
2	Maintenance of Equipment	15.1	23,272 14	13.7	24,913 07
3	Traffic	1.	1,603 10	.6	1,054 05
4	Transportation—Rail Line	37.8	58,340 34	45.1	82,130 19
5	Transportation—Water Line	.....	.....	.....	.....
6	Miscellaneous Operations	1.6	2,551 09	1.9	3,495 36
7	General	3.7	5,673 50	4.5	8,210 16
8	Transportation for Investment—Cr	.1	201 12	.1	177 61
	TOTAL OPERATING EXPENSES	82.9	128,058 51	84.7	154,095 95
	BALANCE	.....	26,408 56	.....	27,909 58
	OTHER INCOME:				
	Ore Royalties	.....	Dr. 1,572 79	.....	Dr. 390 75
	Rent from Locomotives	.....	398 96	.....	376 44
	Rent from Work Equipment	.....	83 56	.....	384 62
	Rent from Joint Facilities	.....	1,088 96	.....	1,081 81
	Rent from Lease of Road	.....	1,121 15	.....	1,124 49
	Miscellaneous Income	.....	112 26	.....	68 10
	Interest	.....	.....	.....	972 02
	Total	.....	27,640 66	.....	31,526 31
	DEDUCTIONS FROM INCOME:				
	Hire of Equipment—Freight Cars	.....	4,067 51	.....	6,257 74
	Hire of Equipment—Passenger Cars	.....	1,805 15	.....	1,460 14
	Rent for Joint Facilities	.....	312 00	.....	315 50
	Total	.....	6,184 66	.....	8,033 38
	NET RESULT	.....	21,456 00	.....	23,492 93

ONTARIO RAILWAY

by Months, November, 1915, to October 1917

Per Cent.	1915 December	Per Cent.	1916 December	Per Cent.	1916 January	Per Cent.	1917 January	No.
	$ c.		$ c.		$ c.		$ c.	
.....	102,238 62	.....	117,885 87	.....	93,137 58	.....	111,636 84	101
.....	43,943 37	.....	54,121 27	.....	38,890 21	.....	45,984 85	102
.....	230 25	.....	220 67	.....	288 96	.....	280 79	103
.....	45 15	.....	43 40	.....	49 80	.....	52 15	105
.....	2,027 70	.....	1,952 60	.....	1,952 60	.....	2,026 42	106
.....	5,319 35	.....	5,672 61	.....	4,008 47	.....	5,402 30	107
.....	.....	.....	.....	.....	.....	.....	.....	108
.....	.....	.....	.....	.....	.....	.....	.....	109
.....	1,069 33	.....	861 10	.....	964 15	.....	650 46	110
.....	.....	.....	.....	.....	.....	.....	.....	111
.....	.....	.....	.....	.....	.....	.....	.....	112
.....	154,873 77	.....	180,757 52	.....	139,291 77	.....	166,033 81	
.....	.....	.....	2,270 60	.....	2,160 52	.....	2,852 18	131
.....	362 49	.....	362 50	.....	362 49	.....	512 50	133
.....	80 10	.....	156 20	.....	99 38	.....	175 46	135
.....	30 90	.....	25 65	.....	35 65	.....	23 90	136
.....	694 00	.....	1,205 00	.....	603 00	.....	2,023 00	137
.....	4,455 19	.....	5,949 31	.....	5,142 74	.....	5,249 04	138
.....	.....	.....	.....	.....	.....	.....	.....	140
.....	440 19	.....	516 19	.....	440 66	.....	273 08	142
.....	42 71	.....	15 30	.....	37 00	.....	10 86	143
.....	6,105 58	.....	10,500 75	.....	8,881 44	.....	11,120 02	
.....	.....	.....	.....	.....	.....	.....	.....	151
.....	63 08	.....	128 76	.....	55 64	.....	14 28	152
.....	63 08	.....	128 76	.....	55 64	.....	14 28	
.....	160,916 27	.....	191,129 51	.....	148,117 57	.....	177,139 55	
18.6	29,981 46	18.3	35,020 85	21.2	31,501 12	16.7	29,616 11	1
13.6	21,829 87	14.6	27,915 51	15.7	23,232 31	16.8	29,775 06	2
1.6	2,536 47	1.	1,868 80	2.	3,013 91	.9	1,622 84	3
39.7	63,818 19	44.6	85,310 66	51.5	76,280 49	48.1	85,087 06	4
.....	.....	.....	.....	.....	.....	.....	.....	5
2.0	3,286 55	3.	5,748 27	3.3	4,975 78	4.2	7,438 36	6
5.7	9,121 10	5.3	10,090 59	4.6	6,761 42	4.9	8,695 39	7
.1	136 95	.1	150 86	.....	35 86	.....	17 70	8
81.1	130,436 69	86.7	165,803 82	98.3	145,729 17	91.6	162,217 12	
.....	30,479 58	.....	25,325 69	.....	2,388 40	.....	14,922 43	
.....	Dr. 375 65	.....	Dr. 365 23	.....	8,076 37	.....	16,809 27	
.....	309 99	.....	322 23	.....	159 60	.....	191 34	
.....	113 05	.....	57 42	.....	Dr. 26 10	.....	Dr. 6 15	
.....	1,110 39	.....	1,119 42	.....	1,116 74	.....	1,036 51	
.....	1,140 02	.....	1,152 98	.....	1,044 42	.....	1,138 65	
.....	81 10	.....	3 50	.....	8 50	.....	41 14	
.....	48 09	.....	8 22	.....	.....	.....	2 18	
.....	32,906 57	.....	27,624 23	.....	12,767 93	.....	34,135 37	
.....	4,781 29	.....	11,727 48	.....	7,381 72	.....	8,008 15	
.....	1,239 98	.....	1,148 20	.....	1,436 57	.....	973 08	
.....	318 00	.....	316 00	.....	315 00	.....	317 00	
.....	6,339 27	.....	13,191 68	.....	9,133 29	.....	9,298 23	
.....	26,567 30	.....	14,432 55	.....	3,634 64	.....	24,837 14	

Comparative Statement of Earnings and Expenditures by

No.	RECEIPTS.	Per Cent.	1916 February	Per Cent.	1917 February	Per Cent.	1916 March
	I. TRANSPORTATION–RAIL LINE:		$ c.		$ c.		$ c.
101	Freight	.....	106,735 47	.....	95,439 04	.....	141,617 65
102	Passenger	.....	29,940 87	.....	36,096 62	.....	38,263 19
103	Excess Baggage	.....	335 28	.....	308 88	.....	440 91
105	Parlor and Chair Car	.....	48 50	.....	56 35	.....	68 10
106	Mail	.....	1,871 50	.....	1,802 40	.....	2,025 78
107	Express	.....	4,047 08	.....	4,494 42	.....	3,662 41
108	Other Passenger Train	.....	.....	.....	.....	.....	.....
109	Milk	.....	.....	.....	.....	.....	.....
110	Switching	.....	1,095 54	.....	616 83	.....	1,101 85
111	Special Service Train—	.....	226 00	.....	82 50	.....	.....
112	Other Freight Train	.....	.....	.....	.....	.....	.....
	Total	.....	144,300 24	.....	138,897 04	.....	187,179 89
	III. INCIDENTALS:						
131	Dining and Buffet	.....	1,075 01	.....	1,173 48	.....	963 59
133	Station, Train and Boat Privileges	.....	362 56	.....	512 50	.....	362 49
135	Storage—Freight	.....	57 03	.....	95 07	.....	215 09
136	" —Baggage	.....	18 10	.....	24 70	.....	24 50
137	Demurrage	.....	615 00	.....	1,614 00	.....	702 60
138	Telegraph and Telephone	.....	3,457 49	.....	4,954 01	.....	4,139 80
140	Stockyard	.....	.....	.....	.....	.....	.....
142	Rents of Buildings and other Property	.....	718 47	.....	876 23	.....	351 82
143	Miscellaneous	.....	30 83	.....	15 30	.....	16 28
	Total	.....	6,334 49	.....	9,265 29	.....	6,776 17
	IV. JOINT FACILITY:						
151	Joint Facility—Cr	.....	.....	.....	.....	.....	.....
152	" " —Dr.	.....	45 94	.....	43 54	.....	52 46
	Total	.....	45 94	.....	43 54	.....	52 46
	TOTAL REVENUE	.....	150,588 79	.....	148,118 79	.....	193,903 60
	EXPENDITURES.						
1	Maintenance of Way & Structures	23.5	35,310 60	21.3	31,516 86	16.1	31,221 35
2	Maintenance of Equipment	16.3	24,491 27	19.9	29,444 04	15.9	30,903 33
3	Traffic	1.3	1,902 02	1.	1,542 07	.7	1,441 97
4	Transportation—Rail Line	51.5	77,691 60	58.6	86,860 41	48.5	94,015 46
5	" —Water Line	.....	.....	.....	.....	.....	.....
6	Miscellaneous Operations	2.2	3,316 32	2.6	3,854 75	2.	3,852 12
7	General	4.1	6,233 01	5.9	8,735 15	3.4	6,542 81
8	Transportation for Investment–Cr.	.....	25 32	.....	70 00	.....	30 88
	TOTAL OPERATING EXPENSES	98.9	148,919 50	109.3	161,883 28	86.6	167,946 16
	BALANCE	.....	1,669 29	.....	Dr 13,764 49	.....	25,957 44
	OTHER INCOME:						
	Ore Royalties	.....	Dr. 364 08	.....	Dr. 361 08	.....	6,016 22
	Rent from Locomotives	.....	143 30	.....	2,120 04	.....	184 72
	Rent from Work Equipment	.....	8 80	.....	5 44	.....	16 33
	Rent from Joint Facilities	.....	1,046 31	.....	1,016 33	.....	1,329 23
	Rent from Lease of Road	.....	863 04	.....	1,087 42	.....	885 25
	Miscellaneous Income	.....	26 24	.....	56 10	.....	54 00
	Interest	.....	13 54	.....	Dr. 1,710 82	.....	45 10
	Total	.....	3,406 44	.....	Dr 11,551 06	.....	34,488 29
	DEDUCTIONS FROM INCOME:						
	Hire of Equipment, Freight Cars	.....	9,704 21	.....	7,325 89	.....	14,869 97
	" " Passenger "	.....	1,322 25	.....	Cr. 487 24	.....	1,698 55
	Rent for Joint Facilities	.....	313 00	.....	310 00	.....	319 00
	Total	.....	11,339 46	.....	7,148 65	.....	16,887 52
	NET RESULT	.....	Dr. 7,933 02	.....	Dr 18,699 71	.....	17,600 77

Months, November, 1915, to October, 1917—Continued

Per Cent.	1917 March	Per Cent.	1916 April	Per Cent.	1917 April	Per Cent.	1916 May	No.
	$ c.		$ c.		$ c.		$ c.	
.....	122,283 98	.....	173,472 76	.....	141,481 80	.....	129,688 74	101
.....	44,356 73	.....	45,016 03	.....	56,651 73	.....	54,727 06	102
.....	338 36	.....	347 28	.....	409 82	.....	474 21	103
.....	55 15	.....	74 25	.....	51 60	.....	85 45	105
.....	1,637 59	.....	1,877 50	.....	1,588 80	.....	2,025 78	106
.....	5,092 09	.....	4,800 03	.....	4,496 08	.....	4,696 04	107
.....	.....	.....	.....	.....	.....	.....	.....	108
.....	.....	.....	.....	.....	.....	.....	.....	109
.....	758 27	.....	1,120 51	.....	844 60	.....	728 59	110
.....	.....	.....	.....	.....	.....	.....	.....	111
.....	.....	.....	.....	.....	.....	.....	.....	112
.....	174,522 17	.....	226,708 36	.....	205,524 43	.....	192,425 87	
.....	.....	.....	.....	.....	.....	.....	1,096 67	131
.....	512 50	.....	362 49	.....	512 50	.....	362 49	133
.....	94 48	.....	144 32	.....	197 41	.....	173 68	135
.....	28 90	.....	32 75	.....	28 70	.....	32 10	136
.....	733 00	.....	716 00	.....	1,594 25	.....	1,207 00	137
.....	5,279 59	.....	5,230 03	.....	5,321 21	.....	4,529 42	138
.....	.....	.....	.....	.....	.....	.....	.....	140
.....	693 24	.....	328 46	.....	257 18	.....	487 47	142
.....	.....	.....	26 78	.....	20 14	.....	20 18	143
.....	7,341 71	.....	6,840 83	.....	7,931 39	.....	7,909 01	
.....	.....	.....	.....	.....	.....	.....	.....	151
.....	30 43	.....	.....	.....	19 99	.....	.....	152
.....	30 43	.....	.....	.....	19 99	.....	.....	
.....	181,833 45	.....	233,549 19	.....	213,435 83	.....	200,334 88	
22.1	40,267 32	12.2	28,388 98	12.7	27,120 27	16.5	33,152 63	1
15.5	28,134 50	10.7	25,101 54	11.6	24,866 89	11.2	22,250 15	2
.9	1,646 24	.5	1,237 48	.5	1,074 55	.8	1,519 95	3
50.2	91,232 28	40.3	94,139 11	41.3	88,194 33	36.5	73,215 82	4
.....	.....	.....	.....	.....	.....	.....	.....	5
1.4	2,550 94	.9	2,091 37	1.5	3,134 93	1.8	3,784 25	6
5.7	10,299 34	2.6	5,977 79	4.2	8,888 18	3.2	6,457 00	7
.....	.....	.....	35 95	.....	16 55	.2	368 95	8
95.8	174,130 62	67.2	156,900 32	71.8	153,262 60	69.8	140,010 85	
.....	7,702 83	.....	76,648 87	.....	60,173 23	.....	60,324 03	
.....	Dr. 961 88	.....	Dr. 364 02	.....	13,365 96	.....	Dr. 357 81	
.....	1,434 71	.....	160 72	.....	1,054 67	.....	408 14	
.....	8 47	.....	24 90	.....	Dr. 34 23	.....	70 20	
.....	1,274 42	.....	1,409 19	.....	1,087 96	.....	904 25	
.....	1,023 69	.....	1,183 34	.....	1,127 60	.....	1,382 20	
.....	146 07	.....	65 50	.....	205 44	.....	119 84	
.....	16 17	.....	1 97	.....	Dr. 984 15	.....	365 16	
.....	10,644 48	.....	79,130 47	.....	75,996 48	.....	63,216 01	
.....	8,806 56	.....	16,304 03	.....	9,518 82	.....	7,019 91	
.....	Cr. 433 61	.....	1,803 88	.....	Cr. 461 42	.....	2,574 27	
.....	317 00	.....	312 50	.....	314 50	.....	321 00	
.....	8,689 95	.....	18,420 41	.....	9,371 90	.....	9,915 18	
.....	1,954 53	.....	60,710 06	.....	66,624 58	.....	53,300 83	

† T.R.

Comparative Statement of Earnings and Expenditures by

No.	RECEIPTS.	Per Cent	1917 May	Per Cent.	1916 June	Per Cent.	1917 June
	I. TRANSPORTATION—RAIL LINE:		$ c.		$ c.		$ c.
101	Freight		142,897 98		91,939 02		119,873 42
102	Passenger		53,266 07		58,770 50		56,820 46
103	Excess Baggage		538 60		480 94		470 25
105	Parlor and Chair Car		45 00		105 85		62 40
106	Mail		1,715 82		1,952 60		1,681 62
107	Express		5,809 95		4,885 95		5,965 14
108	Other Passenger Train						
109	Milk				15		
110	Switching		1,074 44		678 51		546 15
111	Special Service Train						50 00
112	Other Freight Train						
	Total		205,347 86		158,813 52		185,469 44
	III. INCIDENTALS:						
131	Dining and Buffet		984 14				1,258 17
133	Station, Train & Boat Privileges		512 50		362 50		512 50
135	Storage—Freight		187 96		135 23		114 53
136	" —Baggage		27 10		42 55		37 30
137	Demurrage		2,088 00		562 00		3,323 50
138	Telegraph and Telephone		5,415 45		4,301 79		4,812 74
140	Stockyard						
142	Rents of Buildings & other Property		929 57		1,096 55		688 74
143	Miscellaneous		2 00		32 35		92 82
	Total		10,146 72		6,532 97		10,840 30
	IV. JOINT FACILITY:						
151	Joint Facility—Cr.						
152	" —Dr.		57 54				7 71
	Total		57 54				7 71
	TOTAL REVENUE		215,437 04		165,346 49		196,302 03
	EXPENDITURES.						
1	Maintenance of Way and Structures	12.6	27,160 56	22.4	37,065 95	17.3	34,039 99
2	Maintenance of Equipment	11.4	24,543 24	12.9	21,341 88	12.6	24,706 52
3	Traffic	.6	1,330 00	1.	1,691 90	.5	1,050 34
4	Transportation—Rail Line	35.6	76,692 99	35.4	58,624 87	38.4	75,356 40
5	" Water Line						
6	Miscellaneous Operations	1.6	3,547 68	1.4	2,257 47	2.2	4,333 73
7	General	4.2	9,012 18	4.7	7,709 59	5.1	9,904 61
8	Transportation for Invest'nt—Cr.		26 66	.1	226 53		33 53
	TOTAL OPERATING EXPENSES	66.	142,259 99	77.7	128,465 13	76.1	149,358 06
	BALANCE		73,177 05		36,881 36		46,943 97
	OTHER INCOME:						
	Ore Royalties		Dr. 372 20		Dr. 485 49		32,030 35
	Rent from Locomotives		669 54		28 01		170 23
	Rent from Work Equipment		23 03		105 31		17 90
	Rent from Joint Facilities		2,629 01		1,081 53		1,392 83
	Rent from Lease of Road		1,147 79		1,106 84		1,153 75
	Miscellaneous Income		303 01		62 34		568 47
	Interest		Dr. 995 70		14 37		Dr. 830 75
	Total		76,581 53		38,794 27		81,446 75
	DEDUCTIONS FROM INCOME:						
	Hire of Equipment.Freight Cars		3,741 20		4,004 57		5,120 67
	" Passenger "		115 52		2,294 71		Cr. 319 14
	Rent for Joint Facilities		318 00		318 50		315 50
	Total		4,174 72		6,617 78		5,117 03
	NET RESULT		72,406 81		32,176 49		76,329 72

Months, November, 1915, to October, 1917—Continued

Per Cent.	1916 July	Per Cent.	1917 July	Per Cent.	1916 August	Per Cent.	1917 August	No.
	$ c.		$ c.		$ c.		$ c.	
.....	78,564 32	.....	110,113 63	.....	94,070 30	.....	116,727 45	101
.....	64,057 29	.....	56,134 33	.....	61,493 33	.....	61,955 09	102
.....	424 07	.....	338 38	.....	335 99	.....	414 09	103
.....	108 15	.....	97 35	.....	149 85	.....	103 40	105
.....	1,952 60	.....	1,958 32	.....	2,025 78	.....	2,033 64	106
.....	4,642 60	.....	6,407 83	.....	6,246 78	.....	5,964 31	107
.....	.....	.....	.....	.....	.....	.....	.....	108
.....	.....	.....	.....	.....	4 00	.....	1 50	109
.....	542 08	.....	842 82	.....	838 61	.....	692 00	110
.....	.....	.....	.....	.....	488 40	.....	755 00	111
.....	.....	.....	.....	.....	.....	.....	.....	112
.....	150,291 11	.....	175,892 66	.....	165,653 04	.....	188,646 48	
.....	774 62	.....	.....	.....	2,531 62	.....	.....	131
.....	362 52	.....	512 50	.....	362 50	.....	629 16	133
.....	105 60	.....	105 60	.....	78 54	.....	94 23	135
.....	38 75	.....	30 25	.....	30 20	.....	26 25	136
.....	485 00	.....	789 50	.....	948 00	.....	1,113 75	137
.....	5,670 55	.....	4,555 93	.....	5,125 68	.....	5,377 82	138
.....	.....	.....	.....	.....	.....	.....	.....	140
.....	559 53	.....	1,053 77	.....	994 74	.....	817 12	142
.....	16 50	.....	122 32	.....	12 91	.....	112 86	143
.....	8,013 07	.....	7,169 87	.....	10,084 19	.....	8,171 19	
.....	.....	.....	.....	.....	.....	.....	.....	151
.....	187 39	.....	204 85	.....	48 61	.....	11 12	152
.....	187 39	.....	204 85	.....	48 61	.....	11 12	
.....	158,116 79	.....	182,857 68	.....	175,688 62	.....	196,806 55	
13.2	20,808 64	19.6	35,810 89	19.4	33,964 50	21.6	42,549 22	1
8.	12,603 59	11.	20,225 35	10.	17,643 29	10.6	20,822 11	2
.9	1,520 49	.9	1,615 31	2.1	3,758 86	.9	1,761 48	3
36.5	57,641 04	42.3	77,348 11	35.7	62,658 02	38.2	75,081 07	4
.....	.....	.....	.....	.....	.....	.....	.....	5
2.	3,209 14	1.5	2,777 58	2.2	3,939 13	1.4	2,757 40	6
4.9	7,770 94	4.8	8,764 18	4.3	7,478 93	3.9	7,756 38	7
.1	108 84	.1	173 60	.1	220 58	.2	450 46	8
65.4	103,445 00	80.	146,367 82	73.6	129,222 15	76.4	150,277 20	
.....	54,671 79	.....	36,489 86	.....	46,466 47	.....	46,529 35	
.....	Dr. 425 74	.....	Dr. 171 33	.....	11,741 82	..... Dr.	373 38	
.....	752 17	.....	628 86	.....	392 74	.....	781 16	
.....	Dr. 10 15	.....	62 90	.....	281 50	.....	43 40	
.....	1,116 74	.....	1,433 08	.....	1,116 74	.....	1,423 76	
.....	1,097 02	.....	1,156 02	.....	1,203 13	.....	1,193 17	
.....	74 84	.....	429 23	.....	45 14	.....	299 02	
.....	.....	.....	Dr. 700 79	.....	1,232 54	..... Dr.	552 97	
.....	57,276 67	.....	39,327 83	.....	62,480 08	.....	49,343 51	
.....	Cr. 1,892 77	.....	5,256 33	.....	8,894 26	.....	8,689 82	
.....	1,650 67	.....	Cr. 322 99	.....	Cr. 2,956 94	.....	140 81	
.....	316 50	.....	315 50	.....	324 00	.....	316 00	
.....	74 40	.....	5,248 84	.....	6,261 32	.....	9,146 63	
.....	57,202 27	.....	34,078 99	.....	56,218 76	.....	40,196 88	

Comparative Statement of Earnings and Expenditures by

No.	RECEIPTS.	Per Cent.	1916 September	Per Cent.	1917 September	Per Cent.	1916 October
	I. TRANSPORTATION-RAIL LINE:		$ c.		$ c.		$ c.
101	Freight	.....	96,826 21	.....	124,973 81	.....	114,932 61
102	Passenger	.....	80,469 93	.....	73,646 39	.....	65,802 56
103	Excess Baggage	.....	373 18	.....	431 27	.....	543 30
105	Parlor and Chair Car	.....	108 95	.....	103 40	.....	78 60
106	Mail	.....	1,952 60	.....	1,883 00	.....	1,952 60
107	Express	.....	6,482 33	.....	6,769 04	.....	5,719 86
108	Other Passenger Train	.....	.....	.....	.....	.....	.....
109	Milk	.....	60	.....	30	.....	.....
110	Switching	.....	824 05	.....	721 67	.....	1,015 89
111	Special Service Train	.....	155 00	.....	100 00	.....	.....
112	Other Freight Train	.....	.....	.....	.....	.....	.....
	Total	.....	187,192 85	.....	208,628 88	.....	190,045 42
	III. INCIDENTALS:						
131	Dining and Buffet	.....	2,269 23	.....	1,572 02	.....	1,492 19
133	Station, Train and Boat Privileges	.....	362 50	.....	629 16	.....	362 50
135	Storage—Freight	.....	195 40	.....	57 79	.....	90 58
136	" —Baggage	.....	27 20	.....	32 95	.....	15 75
137	Demurrage	.....	1,314 00	.....	2,535 00	.....	1,356 00
138	Telegraph and Telephone	.....	6,077 54	.....	4,608 47	.....	5,007 58
140	Stockyard	.....	.....	.....	.....	.....	.....
142	Rents of Buildings and other Property	.....	610 81	.....	738 05	.....	670 63
143	Miscellaneous	.....	42 68	.....	85 35	.....	77 76
	Total	.....	10,899 36	.....	10,258 79	.....	9,072 99
	IV. JOINT FACILITY:						
151	Joint Facility—Cr	.....	.....	.....	.....	.....	.....
152	" " —Dr	.....	.....	.....	19 58	.....	117 94
	Total	.....	.....	.....	19 58	.....	117 94
	TOTAL REVENUE	.....	198,092 21	.....	218,868 09	.....	199,000 47
	EXPENDITURES						
1	Maintenance of Way & Structures	7.9	15,648 55	15.9	34,725 16	7.6	15,161 24
2	Maintenance of Equipment	6.2	12,378 52	10.1	22,139 06	6.9	13,654 15
3	Traffic	.5	1,047 35	.7	1,565 42	.6	1,192 19
4	Transportation—Rail Line	32.8	64,994 19	35.1	76,832 17	30.5	60,639 62
5	Transportation—Water Line	.....	.....	.....	.....	.....	.....
6	Miscellaneous Operations	2.3	4,485 67	2.	4,414 41	2.4	4,814 00
7	General	5.7	11,358 98	3.9	8,579 63	5.1	10,232 67
8	Transportation for Invest'nt-Cr	.1	275 80	.1	227 12	.1	287 35
	TOTAL OPERATING EXPENSES	55.3	109,637 46	67.6	148,028 73	53.	105,406 52
	BALANCE	.....	88,454 75	.....	70,839 36	.....	93,593 95
	OTHER INCOME:						
	Ore Royalties	.....	Dr. 404 20	.....	41,333 60	.....	28,392 99
	Rent from Locomotives	.....	477 02	.....	317 15	.....	Dr. 186 05
	Rent from Work Equipment	.....	168 90	.....	235 77	.....	141 08
	Rent from Joint Facilities	.....	1,083 33	.....	1,393 49	.....	6,217 04
	Rent from Lease of Road	.....	1,163 88	.....	1,137 86	.....	1,156 75
	Miscellaneous Income	.....	166 60	.....	162 00	.....	213 42
	Interest	.....	6 00	.....	Dr. 399 45	.....	9 59
	Total	.....	91,116 28	.....	115,019 78	.....	129,538 77
	DEDUCTIONS FROM INCOME:						
	Hire of Equipment, Freight Cars	.....	5,160 03	.....	3,140 84	.....	6,806 85
	Hire of Equipment, Passenger Cars	.....	535 63	.....	Cr. 739 41	.....	Cr. 252 32
	Rent for Joint Facilities	.....	318 50	.....	313 00	.....	315 00
	Total	.....	6,014 16	.....	2,714 43	.....	6,869 53
	NET RESULT	.....	85,102 12	.....	112,305 35	.....	122,669 24

Months, November, 1915, to October, 1917—Continued.

Per Cent.	1917 October	Per Cent.	1916 Total	Per Cent.	1917 Total	Increase	Decrease	No.
	$ c.		$ c.		$ c.	$ c.	$ c.	
.....	145,473 86	.....	1,320,569 33	.....	1,459,459 93	138,890 60	.....	101
.....	61,166 11	.....	624,808 12	.....	655,127 58	30,319 46	.....	102
.....	572 48	.....	4,798 60	.....	4,720 68	.....	77 92	103
.....	54 00	.....	984 75	.....	767 60	.....	217 15	105
.....	1,701 00	.....	23,569 64	.....	21,933 81	.....	1,635 83	106
.....	6,276 42	.....	58,848 66	.....	67,569 75	8,721 09	.....	107
.....	.....	.....	.....	.....	.....	.....	.....	108
.....	4 50	.....	4 75	.....	6 30	1 55	.....	109
.....	1,450 84	.....	11,044 98	.....	10,199 07	.....	845 91	110
.....	120 00	.....	869 40	.....	1,107 50	238 10	.....	111
.....	.....	.....	.....	.....	.....	.....	.....	112
.....	216,819 21	.....	2,045,498 23	.....	2,220,892 22	175,393 99	.....	...
.....	886 46	.....	12,363 45	.....	12,163 66	.....	199 79	131
.....	629 16	.....	4,350 02	.....	6,349 98	1,999 96	.....	133
.....	151 70	.....	1,505 96	.....	1,558 25	52 29	.....	135
.....	46 20	.....	371 10	.....	359 65	.....	11 45	136
.....	2,575 75	.....	9,694 60	.....	21,126 75	11,432 15	.....	137
.....	5,451 63	.....	56,797 76	.....	60,267 50	3,469 74	.....	138
.....	.....	.....	.....	.....	.....	.....	.....	140
.....	1,383 90	.....	7,869 84	.....	9,327 47	1,457 63	.....	142
.....	46 75	.....	360 23	.....	541 78	181 55	.....	143
.....	11,171 55	.....	93,312 96	.....	111,695 04	18,382 08	.....	
.....	.....	.....	.....	.....	.....	.....	.....	151
.....	19 02	.....	689 24	.....	681 47	.....	7 77	152
.....	19 02	.....	689 24	.....	681 47	.....	7 77	
.....	227,971 74	.....	2,138,121 95	.....	2,331,905 79	193,783 84	.....	
20.6	46,968 88	16.3	349,024 48	18.	419,266 84	70,242 36	.....	1
12.2	27,801 51	11.6	248,702 04	13.1	305,286 86	56,584 82	.....	2
.7	1,545 00	1.1	22,465 69	.8	17,676 10	.....	4,789 59	3
37.4	85,326 52	39.4	842,058 75	42.3	985,452 19	143,393 44	.....	4
.....	.....	.....	.....	.....	.....	.....	.....	5
1.7	3,771 28	2.	42,562 89	2.	47,824 69	5,261 80	.....	6
3.6	8,319 26	4.3	91,317 74	4.6	107,255 05	15,937 31	.....	7
.....	121 35	.1	1,954 13	.1	1,465 44	.....	488 69	8
76.2	173,611 10	74.6	1,594,177 46	80.7	1,881,296 29	287,128 83	.....	
.....	54,360 64	.....	543,944 49	.....	450,609 50	.....	93,334 99	
.....	19,032 71	.....	49,877 62	.....	119,576 04	69,698 42	.....	
.....	188 69	.....	3,229 32	.....	8,255 06	5,025 74	.....	
.....	363 58	.....	977 38	.....	1,162 15	184 77	.....	
.....	1,429 32	.....	18,620 45	.....	16,317 94	.....	2,302 51	
.....	1,180 73	.....	13,347 04	.....	13,624 15	277 11	.....	
.....	63 00	.....	1,029 78	.....	2,345 08	1,315 30	.....	
.....	Dr. 473 44	.....	1,736 36	.....	Dr. 5,649 48	.....	7,385 84	
.....	76,145 23	.....	88,817 95	.....	155,630 94	66,812 99	.....	
.....	7,617 49	.....	87,101 58	.....	85,210 99	.....	1,890 59	
.....	Cr. 213 05	.....	13,152 40	.....	860 89	.....	12,291 51	
.....	.....	.....	3,803 00	.....	3,468 00	.....	335 00	
.....	7,404 44	.....	104,056 98	.....	89,539 88	.....	14,517 10	
.....	68,740 79	.....	528,705 46	.....	516,700 56	.....	12,004 90	

Comparative Statement of Earnings and Expenditures by

No.	Maintenance of Way and Structures	1915 November.	1916 November.	1915 December.	1916 December.
		$ c.	$ c.	$ c.	$ c.
201	Superintendence	1,772 86	2,105 93	1,782 06	2,327 81
202	Roadway Maintenance	6,587 79	3,410 48	4,499 91	2,730 56
208	Bridges, Trestles and Culverts	1,316 43	273 11	1,705 61	727 01
212	Ties	4,021 35	993 32	3,507 91	474 89
214	Rails	2,125 51	6,911 30	2,296 03	1,879 93
216	Other Track Material	4,244 71	2,587 25	Cr. 511 06	3,181 97
218	Ballast	996 19	212 20	886 23	Cr. 55 03
220	Track Laying and Surfacing	10,869 78	12,173 10	7,433 65	9,355 69
221	Right-of-Way Fences	389 65	510 53	Cr. 37 04	260 94
225	Crossings and Signs	94 99	114 47	205 59	75 43
227	Station and Office Buildings	976 49	1,013 14	753 65	4,520 26
229	Roadway Buildings	133 21	169 27	171 59	1,224 58
231	Water Stations	357 87	965 16	3,238 62	482 76
233	Fuel Stations	12 29	65 51	28 39	334 38
235	Shops and Engine houses	1,360 92	584 17	1,122 96	2,436 01
247	Telegraph and Telephone Lines	319 75	486 47	382 84	393 92
249	Signals and Interlockers	94	.....	.....	.....
257	Power Transmission Systems	.....	.....	.....	.....
265	Miscellaneous Structures	98 99	62 19	.....	12 09
269	Roadway Machines	36 28	145 64	48 90	109 14
271	Small Tools and Supplies	198 30	367 51	236 07	390 71
272	Removing Snow, Ice and Sand	541 53	1,063 33	3,735 17	3,867 59
274	Injuries to Persons	69 52	25 00	6 27	133 21
275	Insurance	283 90	298 81	239 14	242 30
276	Stationery and Printing	29 51	69 88	45 53	63 84
277	Other Expenses	1 20	.....	.....	.....
278	Maintaining Joint Tracks, Yards, and other Facilities—Dr.	212 00	165 50	218 00	216 00
279	Maintaining Joint Tracks, Yards, and other Facilities—Cr.	232 50	302 54	2,014 56	365 14
	Total	36,819 46	34,470 73	29,981 46	35,020 85
	Maintenance of Equipment.				
301	Superintendence	880 10	1,098 93	1,037 48	1,188 11
302	Shop Machinery	553 29	1,001 86	515 20	943 41
304	Power Plant Machinery	.....	.....	.....	.....
308	Steam Locomotives —Repairs	7,233 64	8,481 74	7,874 93	10,107 61
309	" " —Depreciation	1,247 13	1,520 73	1,247 13	1,589 76
310	" " —Retirements	.....	.....	.....	.....
311	Other Locomotives —Repairs	.....	.....	.....	.....
312	" " —Depreciation	.....	.....	.....	.....
313	" " —Retirements	.....	.....	.....	.....
314	Freight Train Cars —Repairs	3,111 61	3,187 69	2,213 53	3,550 21
315	" " " —Depreciation	1,038 55	1,036 41	1,038 55	1,036 41
316	" " " —Retirements	.....	130 51	.....	.....
317	Passenger Train Cars—Repairs	5,692 91	5,932 21	5,631 30	6,798 95
318	" " " —Depreciation	1,114 45	1,251 87	1,114 45	1,251 87
319	" " " —Retirements	.....	.....	.....	.....
326	Work Equipment —Repairs	1,587 11	607 88	514 60	873 30
327	" " —Depreciation	338 41	406 61	338 41	406 61
328	" " —Retirements	.....	.....	.....	.....
329	Miscellaneous Equipment—Repairs	.....	.....	.....	.....
332	Injuries to Persons	37 59	82 40	.....	22 19
333	Insurance	563 52	424 55	437 42	444 47
334	Stationery and Printing	63 58	119 61	76 92	71 82
335	Other Expenses	118 04	.....	118 20	10 30
336	Maintaining Joint Equipment at Terminals—Dr.	.....	.....	.....	.....
337	Maintaining Joint Equipment at Terminals—Cr.	307 79	369 93	328 25	379 51
	Total	23,272 14	24,913 07	21,829 87	27,915 51

Months, November, 1915, to October, 1917---Continued.

1916 January.	1917 January.	1916 February.	1917 February.	1916 March.	1917 March.	No.
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	
1,519 80	2,365 51	1,623 03	2,368 96	1,870 74	2,149 28	201
4,409 41	1,999 16	3,875 16	2,173 48	4,695 69	2,796 85	202
1,324 19	1,791 41	971 98	950 51	793 30	1,416 16	208
3,465 00	84 48	3,468 70	.....	3,465 00	Cr. 188 14	212
705 40	Cr. 4,520 15	1,104 18	1,830 21	1,440 75	5,152 16	214
1,207 63	1,670 89	1,552 13	1,296 63	1,243 26	1,771 92	216
1,000 00	.....	1,047 11	.....	1,000 00	.....	218
5,200 35	8,229 68	6,152 07	5,132 56	7,883 25	4,881 59	220
.....	.....	.....	.....	16 89	.....	221
103 59	92 65	18 70	12 24	37 57	4 77	225
839 98	5,406 59	577 56	4,168 55	666 61	5,117 95	227
85 10	1,140 58	35 91	1,102 79	Cr. 72 15	1,080 56	229
Cr. 2,579 38	508 10	318 11	378 13	401 96	189 23	231
20 78	407 54	36 82	58 65	183 17	28 15	233
420 42	2,130 48	434 57	2,198 57	273 64	2,654 29	235
335 50	121 84	282 45	324 52	422 67	342 59	247
18 26	.....	Cr. 70	1 55	1 75	.....	249
.....	.....	.....	.....	.....	.....	257
.....	18 76	1 32	53	12 10	Cr. 65 12	265
101 03	113 93	135 41	162 47	153 00	148 01	269
212 85	374 66	120 16	431 02	86 92	361 81	271
11,347 00	8,601 24	13,500 45	9,222 61	6,834 58	12,855 36	272
.....	.....	7 84	11 09	10 32	.....	274
239 06	243 19	238 96	261 66	239 98	215 73	275
70 38	59 60	61 32	35 57	44 95	74 30	276
.....	.....	.....	.....	.....	.....	277
215 00	217 00	213 00	210 00	219 00	217 00	278
Dr. 1,239 77	1,441 03	465 64	815 44	703 60	937 13	279
31,501 12	29,616 11	35,310 60	31,516 86	31,221 35	40,267 32	
1,085 17	1,269 74	1,006 31	1,242 38	950 41	1,142 93	301
716 17	703 09	533 76	1,086 36	759 79	346 13	302
.....	.....	.....	.....	.....	.....	304
9,085 43	11,212 89	9,333 03	10,756 46	10,527 22	10,577 52	308
1,247 13	1,589 76	1,247 13	1,589 76	1,247 13	1,589 76	309
.....	.....	.....	.....	.....	.....	310
.....	.....	.....	.....	.....	.....	311
.....	.....	.....	.....	.....	.....	312
.....	.....	.....	.....	.....	.....	313
2,658 15	3,123 53	4,194 41	4,761 01	5,947 67	2,731 34	314
1,038 55	1,036 41	1,038 55	1,036 41	1,038 55	1,036 41	315
.....	.....	.....	1,179 44	.....	819 47	316
4,950 79	7,888 20	4,603 09	5,646 28	8,401 45	7,041 87	317
1,114 45	1,251 87	1,114 45	1,251 87	1,114 45	1,251 87	318
.....	.....	.....	.....	.....	.....	319
808 17	1,097 11	770 77	362 62	396 36	804 03	326
338 41	406 61	338 41	406 61	338 41	406 61	327
.....	.....	.....	.....	.....	.....	328
.....	.....	.....	.....	.....	.....	329
.....	76 21	29 25	84	2 04	38 05	332
423 44	443 01	429 62	447 17	430 82	638 20	333
78 93	93 66	124 79	92 03	118 53	164 72	334
118 59	1 50	118 44	.....	117 93	14 12	335
.....	.....	.....	.....	.....	.....	336
431 07	418 53	390 74	415 20	487 43	468 53	337
23,232 31	29,775 06	24,491 27	29,444 04	30,903 33	28,134 50	

Comparative Statement of Earnings and Expenditures by

No.	Maintenance of Way and Structures.	1916 April.	1917 April.	1916 May.	1917 May.
		$ c.	$ c.	$ c.	$ c.
201	Superintendence	1,982 82	2,069 89	2,276 58	2,197 21
202	Roadway Maintenance	8,103 44	7,217 78	7,211 79	4,889 02
208	Bridges, Trestles and Culverts	1,353 51	710 69	1,243 43	1,069 55
212	Ties	3,465 00	11 49	4,260 80	2,620 32
214	Rails	884 87	925 91	1,591 74	861 93
216	Other Track Material	1,070 38	1,717 11	439 51	923 59
218	Ballast	1,000 00	169 61	1,000 00	13 20
220	Track Laying and Surfacing	6,958 32	5,157 95	9,415 07	9,521 66
221	Right-of-Way Fences	191 57	47 26	466 66	282 49
225	Crossings and Signs	118 19	60 39	97 92	195 50
227	Station and Office Buildings	988 66	1,080 60	2,396 43	2,213 63
229	Roadway Buildings	126 92	75 95	129 96	362 87
231	Water Stations	237 11	478 01	391 90	221 41
233	Fuel Stations	27 36	64 69	687 02	105 20
235	Shops and Enginehouses	342 96	1,008 23	253 40	1,254 01
247	Telegraph and Telephone Lines	271 70	708 93	455 21	179 22
249	Signals and Interlockers	.....	.....	.....	8 23
257	Power Transmission Systems	.....	.....	.....	1 82
265	Miscellaneous Structures	2 24	528 94	1 03	72 90
269	Roadway Machines	237 22	234 53	611 50	391 75
271	Small Tools and Supplies	440 55	366 75	434 90	558 29
272	Removing Snow, Ice and Sand	390 68	4,306 25	.....	131 72
274	Injuries to Persons	.....	22 73	37 38	.....
275	Insurance	238 65	221 26	235 42	225 12
276	Stationery and Printing	105 30	55 21	109 82	66 65
277	Other Expenses	.....	.....	.....	.....
278	Maintaining Joint Tracks, Yards, and other Facilities—Dr.	212 50	214 50	221 00	218 00
279	Maintaining Joint Tracks, Yards, and other Facilities—Cr.	360 97	334 39	815 84	1,424 73
	Total	28,388 98	27,120 27	33,152 63	27,160 56
	Maintenance of Equipment.				
301	Superintendence	1,018 27	1,433 44	997 85	1,338 62
302	Shop Machinery	548 84	501 50	400 39	250 67
304	Power Plant Machinery	.....	.....	.....	75 22
308	Steam Locomotives—Repairs	8,086 33	10,789 53	7,840 99	9,859 76
309	" " —Depreciation	1,247 13	1,589 76	1,247 13	1,589 76
310	" " —Retirements	.....	.....	.....	.....
311	Other Locomotives —Repairs	.....	.....	.....	.....
312	" " —Depreciation	.....	.....	.....	.....
313	" " —Retirements	.....	.....	.....	.....
314	Freight Train Cars—Repairs	5,285 58	Cr.3,070 03	2,305 83	Cr.3,294 65
315	" " " —Depreciation.	1,038 55	1,036 41	1,038 55	1,036 41
316	" " " —Retirements.	.....	723 35	.....	2,618 46
317	Passenger Train Cars—Repairs	4,623 50	4,225 02	3,082 65	4,145 50
318	" " " —Depreciation.	1,114 45	1,251 87	1,114 45	1,251 87
319	" " " —Retirements	.....	2,195 20	.....	.....
326	Work Equipment—Repairs	1,609 75	2,220 51	3,595 42	4,951 49
327	" " —Depreciation	338 41	406 61	338 41	406 61
328	" " —Retirements	.....	1,420 00	.....	.....
329	Miscellaneous Equipment—Repairs	.....	.....	.....	.....
332	Injuries to Persons	.....	.....	37 53	76 88
333	Insurance	430 79	443 81	428 52	443 95
334	Stationery and Printing	71 70	114 75	94 80	234 16
335	Other Expenses	117 32	10 84	126 97	7 30
336	Maintaining Joint Equipment at Terminals—Dr.	.....	.....	.....	.....
337	Maintaining Joint Equipment at Terminals—Cr.	429 08	425 68	399 34	448 77
	Total	25,101 54	24,866 89	22,250 15	24,543 24

Months, November, 1915, to October, 1917—Continued.

1916 June.	1917 June.	1916 July.	1917 July.	1916 August.	1917 August.	No.
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	
2,271 73	2,129 33	2,227 29	2,174 99	2,381 41	2,268 60	201
5,923 47	4,116 25	5,564 93	7,221 22	6,273 56	5,260 55	202
676 31	753 55	776 50	899 42	534 14	390 74	208
8,554,46	4,253 33	Cr. 1,516 80	4,831 72	4,107 25	4,400 24	212
1,078 35	215 09	Cr. 797 22	114 15	21 16	3,945 05	214
1,379 04	1,172 56	382 75	983 11	1,091 11	3,884 00	216
994 85	102 47	Cr. 589 14	123 17	Cr. 580 55	212 29	218
11,501 83	13,721 40	10,953 01	11,033 73	13,312 87	13,006 92	220
300 56	299 65	47 71	1,025 78	267 19	906 90	221
64 93	337 07	84 53	245 53	52 75	104 99	225
1,780 76	3,292 89	1,275 25	3,689 24	2,527 60	2,476 44	227
590 06	580 77	261 69	486 10	81 76	1,342 58	229
538 25	378 59	127 72	1,086 77	400 77	2,435 76	231
162 92	250 77	6 75	166 18	5 25	13 02	233
384 77	1,108 42	256 24	1,113 48	373 21	501 93	235
389 02	319 86	522 23	455 05	1,084 53	318 28	247
3 14	3 55	4 13	3 15	11 18	52	249
.....	.....	.....	.....	.....	.....	257
.....	408 04	.....	36 04	.....	201 46	265
284 10	185 29	318 38	194 76	767 25	542 33	269
348 57	364 28	113 32	433 69	1,140 19	387 29	271
Cr. 90 00	185 44	.....	.....	.....	.....	272
12 21	81 29	712 32	126 55	8 80	120 98	274
242 14	233 38	241 50	230 55	269 02	229 17	275
67 78	74 07	54 16	35 62	35 72	41 69	276
.....	25 45	.....	.....	.....	.....	277
218 50	215 50	216 50	215 50	224 00	216 00	278
611 80	768 30	435 11	1,114 61	425 67	658 51	279
37,065 95	34,039 99	20,808 64	35,810 89	33,964 50	42,549 22	
961 59	1,411 72	1,073 78	1,449 37	1,097 97	1,518 72	301
325 35	425 33	195 79	135 87	525 22	258 66	302
.....	42 95	.....	49 47	.....	74 72	304
7,579 69	10,027 14	6,805 50	9,903 82	7,307 81	8,103 50	308
1,247 13	1,589 76	1,247 13	1,589 76	1,247 13	1,589 76	309
.....	.....	.....	.....	.....	.....	310
.....	.....	.....	.....	.....	.....	311
.....	.....	.....	.....	.....	.....	312
.....	.....	.....	.....	.....	.....	313
2,699 69	Cr. 36 99	1,604 28	Cr. 1,322 97	3,306 86	223 75	314
1,038 55	1,036 41	1,038 55	1,036 41	1,038 55	1,036 41	315
.....	2,866 64	.....	400 01	418 72	10	316
4,518 77	2,069 26	4,252 65	2,331 15	5,270 54	2,775 55	317
1,114 45	1,251 87	1,114 45	1,251 87	1,114 45	1,251 87	318
.....	.....	.....	.....	.....	.....	319
1,301 97	3,283 53	Cr. 5,487 99	2,742 75	Cr. 4,259 83	3,212 81	326
338 41	406 61	338 41	406 61	338 41	406 61	327
.....	.....	.....	.....	.....	.....	328
.....	.....	.....	.....	.....	.....	329
1 55	100 05	169 04	9 90	34 46	136 92	332
425 48	452 60	425 44	459 69	425 31	441 70	333
70 74	100 26	97 35	100 87	68 49	118 16	334
5 15	.....	4 70	.....	12 30	.....	335
.....	.....	.....	.....	.....	.....	336
286 64	320 62	275 49	319 23	303 10	327 13	337
21,341 88	24,706 52	12,603 59	20,225 35	17,643 29	20,822 11	

Comparative Statement of Earnings and Expenditures by

No.	Maintenance of Way and Structures.	1916 September.	1917 September.	1916 October.
		$ c.	$ c.	$ c.
201	Superintendence	2,263 40	2,050 26	2,454 78
202	Roadway Maintenance	4,052 98	6,494 03	5,038 24
208	Bridges, Trestles and Culverts	Cr. 907 53	598 83	Cr. 688 47
212	Ties	Cr. 2,194 01	3,911 44	Cr. 1,961 24
214	Rails	Cr. 2,219 92	581 70	Cr. 3,498 01
216	Other Track Material	38 22	1,909 26	679 44
218	Ballast	Cr. 580 55	137 82	Cr. 238 51
220	Track Laying and Surfacing	10,771 93	11,630 63	9,973 39
221	Right-of-Way Fences	151 45	72 97	460 48
225	Crossings and Signs	93 62	124 17	95 13
227	Station and Office Buildings	2,283 37	2,249 31	1,191 96
229	Roadway Buildings	105 40	992 44	173 71
231	Water Stations	176 81	1,555 93	571 85
233	Fuel Stations	7 65	6 39	5 60
235	Shops and Enginehouses	588 43	1,151 21	296 66
247	Telegraph and Telephone Lines	365 58	401 42	850 43
249	Signals and Interlockers	1 37	16 30	.....
257	Power Transmission Systems	.....	.....	.....
265	Miscellaneous Structures	.....	714 96	.....
269	Roadway Machines	167 27	475 31	151 25
271	Small Tools and Supplies	239 49	231 64	297 14
272	Removing Snow, Ice and Sand	.....	5 49	214 30
274	Injuries to Persons	18 03	22 07	25 00
275	Insurance	253 09	236 95	263 98
276	Stationery and Printing	61 28	98 34	56 89
277	Other Expenses	.....	.....	.....
278	Maintaining Joint Tracks, Yards, and other Facilities—Dr.	218 50	213 00	165 00
279	Maintaining Joint Tracks, Yards, and other Facilities—Cr.	307 31	1,156 71	1,417 76
	Total	15,648 55	34,725 16	15,161 24
	Maintenance of Equipment.			
301	Superintendence	1,189 27	1,435 89	1,271 40
302	Shop Machinery	366 10	162 47	475 27
304	Power Plant Machinery	.....	81 41	.....
308	Steam Locomotives—Repairs	5,093 93	8,736 31	7,167 40
309	" " —Depreciation	1,247 13	1,589 76	1,316 16
310	" " —Retirements	.....	.....	.....
311	Other Locomotives—Repairs	.....	.....	.....
312	" " —Depreciation	.....	.....	.....
313	" " —Retirements	.....	.....	.....
314	Freight Train Cars—Repairs	600 16	Cr. 694 24	850 92
315	" " " —Depreciation	1,038 55	1,036 41	1,038 55
316	" " " —Retirements	.....	801 10	.....
317	Passenger Train Cars—Repairs	5,766 22	3,588 77	4,655 48
318	" " " —Depreciation	1,114 45	1,251 87	1,114 45
319	" " " —Retirements	.....	.....	.....
326	Work Equipment—Repairs	Cr. 4,607 06	3,411 64	Cr. 5,106 06
327	" " —Depreciation	338 41	406 61	338 41
328	" " —Retirements	.....	.....	.....
329	Miscellaneous Equipment Repairs	.....	.....	.....
332	Injuries to Persons	27 23	37 34	327 36
333	Insurance	424 20	450 28	423 95
334	Stationery and Printing	86 71	144 62	77 51
335	Other Expenses	.....	4 00	17 01
336	Maintaining Joint Equipment at Terminals—Dr.	.....	.....	.....
337	Maintaining Joint Equipment at Terminals—Cr.	306 78	305 18	313 66
	Total	12,378 52	22,139 06	13,654 15

Months, November, 1915, to October, 1917—Continued.

1917 October.	1916 Total.	1917 Total.	Increase.	Decrease.	No.
$ c.	$ c.	$ c.	$ c.	$ c.	
2,125 58	24,426 50	26,333 35	1,906 85	.....	201
8,471 64	66,236 37	56,781 02	.....	9,455 35	202
1,277 93	9,099 40	10,858 91	1,759 51	.....	208
3,539 37	32,643 42	24,932 46	.....	7,710 96	212
6,905 33	4,732 84	24,802 61	20,069 77	.....	214
1,249 19	12,817 12	22,347 48	9,530 36	.....	216
273 29	5,935 63	1,189 02	.....	4,746 61	218
13,716 39	110,425 52	117,561 30	7,135 78	.....	220
116 65	2,255 12	3,523 17	1,268 05	.....	221
79 90	1,067 51	1,447 11	379 60	.....	225
2,445 39	16,258 32	37,673 99	21,415 67	.....	227
1,574 19	1,823 16	10,132 68	8,309 52	.....	229
1,398 29	4,181 59	10,078 14	5,896 55	.....	231
127 73	1,184 00	1,628 21	444 21	.....	233
2,088 25	6,108 18	18,229 05	12,120 87	.....	235
493 20	5,681 91	4,545 30	.....	1,136 61	247
.....	40 07	33 30	.....	6 77	249
.....	.....	1 82	1 82	.....	257
581 74	115 68	2,572 53	2,456 85	.....	265
363 73	3,011 59	3,066 89	55 30	.....	269
437 98	3,868 46	4,705 63	837 17	.....	271
238 68	36,473 71	40,477 71	4,004 00	.....	272
.....	907 69	542 92	.....	364 77	274
226 17	2,984 84	2,864 29	.....	120 55	275
60 80	742 64	735 57	.....	7 07	276
12 00	1 20	37 45	36 25	.....	277
.....	2,553 00	2,318 00	.....	235 00	278
834 54	6,550 99	10,153 07	3,602 08	.....	279
46,968 88	349,024 48	419,266 84	70,242 36	.....	
1,593 78	12,569 60	16,123 63	3,554 03	.....	301
930 40	5,915 17	6,745 75	830 58	.....	302
90 85	.....	414 62	414 62	.....	304
12,659 79	93,935 90	121,216 07	27,280 17	.....	308
1,589 76	15,034 59	19,008 09	3,973 50	.....	309
.....	.....	.....	.....	.....	310
.....	.....	.....	.....	.....	311
.....	.....	.....	.....	.....	312
.....	.....	.....	.....	.....	313
Cr. 3,775 19	34,778 69	5,383 46	.....	29,395 23	314
1,036 41	12,462 60	12,436 92	.....	25 68	315
357 00	418 72	9,896 08	9,477 36	.....	316
143 42	61,449 35	52,586 18	.....	8,863 17	317
1,251 87	13,373 40	15,022 44	1,649 04	.....	318
.....	.....	2,195 20	2,195 20	.....	319
11,239 36	Cr. 8,876 79	34,807 03	43,683 82	.....	326
406 61	4,060 92	4,879 32	818 40	.....	327
.....	.....	1,420 00	1,420 00	.....	328
.....	.....	.....	.....	.....	329
66 53	666 05	647 31	.....	18 74	332
445 06	5,268 51	5,534 49	265 98	.....	333
108 97	1,030 05	1,463 63	433 58	.....	334
.....	874 65	48 06	.....	826 59	335
.....	.....	.....	.....	.....	336
343 11	4,259 37	4,541 42	282 05	.....	337
27,801 51	248,702 04	305,286 86	56,584 82	.....	

Comparative Statement of Earnings and Expenditures by

No.	Traffic.	1915 November.	1916 November.	1915 December.	1916 December.
		$ c.	$ c.	$ c.	$ c.
351	Superintendence	908 34	589 15	851 48	610 99
352	Outside Agencies	18 19	52 14	3 18	287 90
353	Advertising	284 66	76 57	1,256 94	637 07
354	Traffic Associations	95 73	49 97	34 80	54 01
356	Industrial and Immigration Bureaus.	118 33	104 06	137 46	118 66
357	Insurance				
358	Stationery and Printing	177 85	182 16	252 61	160 17
	Total	1,603 10	1,054 05	2,536 47	1,868 80
	Transportation—Rail Line.				
371	Superintendence	1,209 76	1,641 34	1,404 21	1,557 57
372	Dispatching Trains	1,208 80	1,098 55	1,047 90	1,050 60
373	Station Employees	10,616 80	13,635 65	10,624 79	13,739 82
374	Weighing, Inspection and Demurrage Bureaus	21 16	22 68	42 38	22 38
376	Station Supplies and Expenses	1,464 97	1,722 47	1,937 78	2,092 13
377	Yardmasters and Yard Clerks	919 78	959 06	925 27	952 56
378	Yard Conductors and Brakemen	1,567 88	2,053 05	1,635 35	2,354 63
379	Yard Switch and Signal Tenders	60 80	112 56	123 20	131 46
380	Yard Enginemen	1,074 54	1,382 59	1,108 62	1,515 02
382	Fuel for Yard Locomotives	1,310 40	2,118 62	1,655 34	2,759 75
385	Water for Yard Locomotives	41 03	52 16	57 81	41 38
386	Lubricants for Yard Locomotives	24 50	34 68	26 56	36 07
387	Other Supplies for Yard Locomotives	12 81	25 18	15 65	29 19
388	Engine-house Expenses—Yard	324 49	434 65	348 10	584 21
389	Yard Supplies and Expenses	57 56	61 76	70 11	96 28
390	Operating Joint Yards & Terminals—Dr.	100 00	150 00	181 61	100 00
391	" " " —Cr.	3,982 64	5,101 10	3,969 55	5,197 39
392	Train Enginemen	7,359 64	8,826 19	7,904 57	9,153 87
394	Fuel for Train Locomotives	17,868 80	28,274 54	20,768 17	30,390 14
397	Water for Train Locomotives	1,193 47	1,937 39	1,217 90	1,574 37
398	Lubricants for Train Locomotives	252 90	344 90	285 45	344 56
399	Other Supplies for Train Locomotives	118 09	287 95	138 38	267 40
400	Engine-house Expenses—Train	2,896 20	3,159 23	3,456 78	4,059 72
401	Trainmen	8,525 28	10,383 20	9,108 48	10,815 63
402	Train Supplies and Expenses	2,359 61	4,150 61	2,230 99	3,197 35
405	Crossing Protection				
410	Stationery and Printing	854 06	1,227 95	826 70	1,137 18
411	Other Expenses	179 25		64 41	
412	Operating Joint Tracks & Facilities—Dr.				
413	" " " —Cr.	78 85	75 69	80 81	80 21
414	Insurance	164 11	135 16	136 98	134 62
415	Clearing Wrecks	52 39	506 72	43 50	228 83
416	Damage to Property			19 25	
417	Damage to Live Stock on Right-of-Way.	100 00		75 00	
418	Loss and Damage—Freight	377 75	2,213 14	85 33	2,006 98
419	Loss and Damage—Baggage	35 00		13 50	
420	Injuries to Persons	50 00	355 00	288 48	214 56
	Total	58,340 34	82,130 19	63,818 19	85,310 66
	Miscellaneous Operations.				
441	Dining and Buffet Service	608 32	1,266 03	1,230 03	3,193 43
447	Commercial Telegraph Maintenance	163 42	280 05	214 26	63 58
448	" " Operation	783 15	1,061 18	828 39	1,078 43
449	Commercial Telephone Maintenance	209 12	413 36	325 55	372 68
450	" " Operation	787 08	474 74	688 32	1,040 15
	Total	2,551 09	3,495 36	3,286 55	5,748 27

Months, November, 1915, to October, 1917---Continued.

1916 January.	1917 January.	1916 February.	1917 February.	1916 March.	1917 March.	No.
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	
902 35	604 29	893 79	565 86	874 63	610 29	351
362 03	59 06	35 74	45 24	28 74	34 15	352
1,348 29	312 91	299 54	595 83	141 44	445 02	353
52 24	56 91	36 01	46 47	55 55	77 30	354
154 22	467 25	138 07	106 52	129 29	213 70	356
.....	.....	.....	.....	.....	.....	357
194 78	122 42	498 87	182 15	212 32	265 78	358
3,013 91	1,622 84	1,902 02	1,542 07	1,441 97	1,646 24	
1,367 59	1,742 49	1,604 19	1,367 59	1,432 37	1,552 02	371
1,090 04	1,311 05	1,053 41	1,153 29	1,059 58	1,147 34	372
10,688 58	14,920 68	11,092 79	14,007 97	11,307 39	13,935 19	373
.....	32 55	53 87	32 05	25 63	32 17	374
2,374 49	3,040 89	1,882 77	1,780 82	1,734 69	1,924 92	376
957 71	985 74	1,004 87	1,128 17	995 67	1,019 57	377
2,314 39	2,673 99	2,584 43	2,690 26	3,026 07	2,804 16	378
144 40	201 22	140 98	187 74	165 30	167 14	379
1,538 69	1,891 20	1,742 86	1,761 88	1,951 28	1,921 05	380
2,684 91	3,368 11	2,867 95	4,136 25	3,216 70	4,943 30	382
50 52	45 58	92 25	72 31	144 49	40 94	385
38 91	37 25	39 43	35 86	46 21	43 56	386
37 49	28 71	29 05	25 29	30 11	36 20	387
474 84	731 14	497 94	856 02	647 53	778 96	388
66 50	100 25	158 11	93 72	65 37	105 38	389
100 00	100 00	100 00	100 00	100 00	100 00	390
4,680 76	5,242 95	4,419 78	5,329 73	4,930 13	8,995 70	391
8,987 83	9,259 44	9,359 90	8,365 86	12,295 61	9,117 24	392
27,264 54	28,503 55	27,410 21	32,710 35	37,634 14	36,834 33	394
1,890 87	1,590 24	2,003 39	2,007 65	2,637 47	1,900 12	397
327 92	372 56	401 76	314 85	510 60	338 33	398
169 56	284 88	179 71	275 41	232 54	154 84	399
3,889 96	3,811 22	3,452 41	3,899 36	3,829 21	4,137 41	400
9,994 69	9,834 50	10,076 87	10,207 96	12,569 68	10,825 55	401
3,185 19	2,997 91	2,344 28	2,860 01	1,596 54	3,994 80	402
.....	.....	.....	.....	.....	.....	405
710 83	1,520 95	854 01	1,259 09	869 92	1,027 66	410
129 26	36 18	126 26	49 61	250 28	.....	411
.....	.....	.....	.....	.....	.....	412
61 25	75 89	89 49	72 85	25 00	67 52	413
128 04	181 94	133 35	97 46	132 93	228 24	414
73 56	2 38	390 90	656 77	132 28	51 96	415
113 80	.....	.....	.....	77 00	.....	416
50 00	.....	.....	.....	.....	50 00	417
170 39	474 08	301 29	Cr. 17 38	51 86	825 02	418
5 00	.....	.....	.....	17 81	.....	419
2 00	325 22	221 63	146 77	184 33	258 10	420
76,280 49	85,087 06	77,691 60	86,860 41	94,015 46	91,232 28	
2,806 22	5,063 01	1,446 95	1,685 26	1,433 92	53 94	441
131 03	186 51	151 38	133 91	188 08	191 39	447
816 79	1,185 75	707 95	934 22	874 91	1,059 47	448
339 72	189 98	310 25	279 84	475 34	339 57	449
882 02	813 11	699 79	821 52	879 87	906 57	450
4,975 78	7,438 36	3,316 32	3,854 75	3,852 12	2,550 94	

Comparative Statement of Earnings and Expenditures

No.	Traffic.	1916 April.	1917 April.	1916 May.	1917 May.
		$ c.	$ c.	$ c.	$ c.
351	Superintendence	858 38	582 47	853 42	586 67
352	Outside Agencies	.....	48 46	39 55	18 85
353	Advertising	67 27	105 56	171 63	183 13
354	Traffic Associations	.....	71 30	79 36	39 13
356	Industrial and Immigration Bureaus.	162 97	152 05	132 89	106 63
357	Insurance	.....	.....	.....	.....
358	Stationery and Printing	148 86	114 71	243 10	395 59
	Total	1,237 48	1,074 55	1,519 95	1,330 00
	Transportation—Rail Line.				
371	Superintendence	1,417 66	1,518 03	1,340 86	1,509 48
372	Dispatching Trains	1,080 00	1,190 67	1,065 58	1,307 93
373	Station Employees	11,645 26	14,149 01	11,433 90	14,230 12
374	Weighing, Inspection and Demurrage Bureaus	25 19	27 26	139 48	.....
376	Station Supplies and Expenses	1,206 23	1,554 37	939 44	1,559 87
377	Yardmasters and Yard Clerks	987 52	1,122 43	1,025 21	1,123 78
378	Yard Conductors and Brakemen	2,805 07	2,988 34	2,291 53	2,843 44
379	Yard Switch and Signal Tenders	128 63	138 66	139 00	206 80
380	Yard Enginemen	1,803 41	1,899 33	1,537 85	1,916 92
382	Fuel for Yard Locomotives	3,640 49	3,946 30	2,354 20	3,588 56
385	Water for Yard Locomotives	74 14	61 54	81 11	6 36
386	Lubricants for Yard Locomotives	53 36	37 54	37 33	89 49
387	Other Supplies for Yard Locomotives.	30 66	31 18	25 65	36 67
388	Engine-house Expenses—Yard	531 92	664 02	427 52	737 15
389	Yard Supplies and Expenses	65 06	93 44	41 10	77 38
390	Operating Joint Yards & Terminals–Dr.	100 00	100 00	100 00	100 00
391	" " " " –Cr.	4,795 98	6,091 70	4,633 58	9,905 33
392	Train Enginemen	12,878 21	8,945 53	9,432 42	8,507 11
394	Fuel for Train Locomotives	37,175 09	34,012 34	24,468 84	28,148 27
397	Water for Train Locomotives	1,733 12	2,021 36	1,457 65	1,319 70
398	Lubricants for Train Locomotives	530 97	278 90	395 03	611 89
399	Other Supplies for Train Locomotives	241 46	153 37	227 26	154 61
400	Engine-house Expenses—Train	3,771 72	2,841 76	2,800 06	2,928 83
401	Trainmen	12,889 59	11,390 88	9,964 07	10,435 77
402	Train Supplies and Expenses	2,196 14	2,881 43	1,947 97	2,648 63
405	Crossing Protection	.....	.....	.....	.....
410	Stationery and Printing	966 22	834 10	1,330 71	962 02
411	Other Expenses	271 26	92 50	278 26	Cr. 6 75
412	Operating Joint Tracks & Facilities–Dr.	.....	.....	.....	.....
413	" " " " –Cr.	72 45	25 00	77 29	113 66
414	Insurance	191 62	135 79	132 36	195 73
415	Clearing Wrecks	176 56	502 07	1,422 35	320 06
416	Damage to Property	.....	.....	.....	.....
417	Damage to Live Stock on Right-of-Way	.....	60 00	.....	50 00
418	Loss and Damage—Freight	302 97	342 16	363 87	451 15
419	Loss and Damage—Baggage	.....	59 19	4 00	11 78
420	Injuries to Persons	88 01	237 53	722 08	639 23
	Total	94,139 11	88,194 33	73,215 82	76,692 99
	Miscellaneous Operations.				
441	Dining and Buffet Service	134 78	104 41	1,338 02	1,518 42
447	Commercial Telegraph, Maintenance.	134 01	488 87	211 11	49 02
448	" " Operation	805 90	1,110 79	954 10	1,202 85
449	Commercial Telephone Maintenance.	227 79	601 67	334 13	222 85
450	" " Operation	788 89	829 19	946 89	554 54
	Total	2,091 37	3,134 93	3,784 25	3,547 68

by Months, November, 1915, to October, 1917.---Continued.

1916 June.	1917 June.	1916 July.	1917 July.	1916 August.	1917 August.	No.
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	
829 07	605 20	574 26	633 70	533 12	635 68	351
35 14	36 19	192 55	58 99	760 53	124 00	352
536 34	146 12	503 32	408 07	2,216 82	338 87	353
35 24	11 69	35 01	75 86	59 04	35 98	354
155 32	143 50	132 45	140 30	103 14	176 56	356
.....	.....	.....	.....	.....	.....	357
100 79	107 64	82 90	298 39	86 21	450 39	358
1,691 90	1,050 34	1,520 49	1,615 31	3,758 86	1 761 48	
1,380 49	1,459 30	1,431 99	1,441 72	1,494 74	1,501 56	371
1,068 73	1,314 29	1,214 59	1,317 58	1,172 88	1,175 04	372
10,968 35	13,665 09	11,259 49	14,079 64	11,624 10	13,333 79	373
20 49	65 08	4 50	27 77	48 06	31 36	374
1,026 09	1,129 78	552 64	934 80	873 67	1,463 47	376
930 18	1,293 23	944 58	1,569 63	989 25	1,523 91	377
1,426 75	2,157 16	1,499 76	2,180 11	1,559 70	2,189 84	378
133 60	211 77	102 00	202 19	105 21	202 84	379
927 91	1,567 77	1,043 61	1,593 55	878 35	1,640 13	380
1,671 05	3,020 70	1,499 54	3,376 17	1,647 88	3,267 72	382
42 12	80 97	25 80	29 21	53 02	19 47	385
23 10	38 44	Cr. 30 61	32 11	18 73	36 61	386
15 92	24 94	10 29	23 26	15 05	31 76	387
277 99	419 56	253 00	439 34	257 04	489 22	388
48 67	61 45	48 26	69 25	38 71	64 18	389
100 00	100 00	100 00	100 00	100 00	100 00	390
3,891 82	6,091 50	3,773 70	5,641 36	4,140 97	6,570 52	391
7,472 18	8,232 02	7,499 24	8,171 73	8,421 14	9,069 11	392
19,108 15	27,049 85	17,370 73	29,000 43	20,465 75	25,126 30	394
1,487 59	2,112 67	1,167 81	1,848 52	1,100 53	1,474 34	397
360 71	273 04	Cr. 4 33	331 14	314 50	309 70	398
200 34	138 81	137 98	131 22	167 63	141 63	399
2,412 06	2,614 13	2,292 28	2,465 70	2,348 49	2,659 69	400
8,663 94	9,947 38	9,006 95	9,767 48	10,027 34	10,525 72	401
1,702 67	2,491 02	2,101 78	2,342 98	1,492 13	2,658 43	402
.....	.....	.....	.....	.....	.....	405
701 19	1,159 80	832 89	1,203 04	942 38	1,168 56	410
242 93	4 50	221 67	.....	.....	53 32	411
.....	.....	.....	.....	.....	.....	412
25 00	67 58	105 58	68 30	66 41	69 77	413
135 31	136 39	134 24	134 91	134 47	174 52	414
146 41	275 87	53 39	191 30	188 39	484 70	415
.....	.....	.....	.....	.....	.....	416
3 04	65 00	.....	.....	.....	.....	417
Cr. 203 79	42 68	389 22	Cr. 64 09	260 42	560 26	418
.....	.....	50	3 09	.....	6 11	419
47 52	362 79	356 53	113 99	125 84	238 07	420
58,624 87	75,356 40	57,641 04	77,348 11	62.658 02	75,081 07	
Cr. 91 86	1,706 08	780 12	.....	879 03	.....	441
235 28	267 61	274 67	319 16	430 76	259 06	447
917 30	1,147 82	1,014 23	1,085 01	1,219 73	1,122 00	448
371 08	407 11	408 41	600 30	603 10	570 22	449
825 67	805 11	731 71	773 11	806 51	806 12	450
2,257 47	4,333 73	3,209 14	2,777 58	3,939 13	2,757 40	

Comparative Statement of Earnings and Expenditures by

No.	Traffic.	1916 September.	1917 September.	1916 October.
		$ c.	$ c.	$ c.
351	Superintendence	544 40	610 81	559 70
352	Outside Agencies	134 92	46 07	82 23
353	Advertising	56 90	365 59	172 35
354	Traffic Associations	53 39	147 62	121 02
356	Industrial and Immigration Bureaus	101 76	276 54	121 51
357	Insurance	.....	.....	.....
358	Stationery and Printing	155 98	118 79	135 38
	Total	1,047 35	1,565 42	1,192 19
	Transportation—Rail Line.			
371	Superintendence	1,426 99	1,534 31	1,530 57
372	Dispatching Trains	1,125 35	1,191 80	1,098 43
373	Station Employees	12,055 56	14,133 02	12,899 70
374	Weighing, Inspection and Demurrage Bureaus	24 13	41 13	88 20
376	Station Supplies and Expenses	961 92	791 06	1,275 97
377	Yardmasters and Yard Clerks	902 06	1,536 88	965 34
378	Yard Conductors and Brakemen	1,660 32	2,163 86	1,901 81
379	Yard Switch and Signal Tenders	102 06	195 03	107 10
380	Yard Enginemen	1,087 99	1,550 30	1,175 45
382	Fuel for Yard Locomotives	1,752 46	3,420 77	1,794 34
385	Water for Yard Locomotives	30 92	19 85	37 91
386	Lubricants for Yard Locomotives	28 12	35 04	34 99
387	Other Supplies for Yard Locomotives	17 40	22 69	19 87
388	Engine-house Expenses—Yard	275 79	462 26	309 95
389	Yard Supplies and Expenses	44 05	82 42	55 71
390	Operating Joint Yards & Terminals—Dr.	100 00	100 00	150 00
391	" " " —Cr.	4,342 74	5,939 59	11,561 89
392	Train Enginemen	8,407 11	8,480 31	8,707 88
394	Fuel for Train Locomotives	21,392 08	26,299 64	20,812 59
397	Water for Train Locomotives	1,303 34	1,642 49	1,049 90
398	Lubricants for Train Locomotives	302 35	302 56	313 29
399	Other Supplies for Train Locomotives	135 61	188 43	236 53
400	Engine-house Expenses—Train	2,191 61	2,639 79	3,099 25
401	Trainmen	9,854 66	10,443 83	10,384 51
402	Train Supplies and Expenses	2,717 02	3,867 78	1,270 98
405	Crossing Protection	.....	.....	.....
410	Stationery and Printing	872 04	1,141 14	1,371 62
411	Other Expenses	10 40	77 30	62 83
412	Operating Joint Tracks & Facilities—Dr.	.....	.....	.....
413	" " " —Cr.	69 89	71 48	71 49
414	Insurance	134 29	135 38	134 03
415	Clearing Wrecks	161 32	294 50	457 78
416	Damage to Property	.....	.....	.....
417	Damage to Live Stock on Right-of-Way	3 84	.....	50 00
418	Loss and Damage—Freight	196 03	Cr. 21 62	284 01
419	Loss and Damage—Baggage	.....	7 00	.....
420	Injuries to Persons	130 00	64 29	592 46
	Total	64,994 19	76,832 17	60,639 62
	Miscellaneous Operations.			
441	Dining and Buffet Service	2,062 77	1,883 26	1,768 82
447	Commercial Telegraph Maintenance	285 68	300 69	556 63
448	" " Operation	964 73	1,036 81	961 54
449	Commercial Telephone Maintenance	415 57	415 08	759 01
450	" " Operation	756 92	778 57	768 00
	Total	4,485 67	4,414 41	4,814 00

Months, November, 1915, to October, 1917---Continued.

1917 October.	1916 Total.	1917 Total.	Increase.	Decrease.	No.
$ c.	$ c.	$ c.	$ c.	$ c.	
677 12	9,182 94	7,312 23	.....	1,870 71	351
37 73	1,692 80	848 78	.....	844 02	352
486 69	7,055 50	4,101 43	.....	2,954 07	353
64 74	657 39	730 98	73 59	.....	354
150 29	1,587 41	2,156 06	568 65	.....	356
.....	.....	.....	.....	.....	357
128 43	2,289 65	2,526 62	236 97	.....	358
1,545 00	22,465 69	17,676 10	.....	4,789 59	
1,511 85	17,041 42	18,337 26	1,295 84	.....	371
1,168 98	12,285 29	14,427 12	2,141 83	.....	372
15,111 26	136,216 71	168,941 24	32,724 53	.....	373
31 02	493 09	365 45	.....	127 64	374
1,523 07	16,230 66	19,517 65	3,286 99	.....	376
1,658 78	11,547 44	14,873 74	3,326 30	.....	377
2,444 26	24,273 06	29,543 10	5,270 04	.....	378
198 74	1,452 28	2,156 15	703 87	.....	379
1,717 66	15,870 56	20,357 40	4,486 84	.....	380
3,573 33	26,095 26	41,519 58	15,424 32	.....	382
19 77	731 12	489 54	.....	241 58	385
39 49	340 63	496 14	155 51	.....	386
25 44	259 95	340 51	80 56	.....	387
567 19	4,626 11	7,163 72	2,537 61	.....	388
101 99	759 21	1,007 50	248 29	.....	389
.....	1,331 61	1,150 00	.....	181 61	390
6,569 80	59,123 54	76,676 67	17,553 13	.....	391
8,869 18	108,725 73	104,997 59	.....	3,728 14	392
30,146 50	291,739 09	356,496 24	64,757 15	.....	394
1,808 84	18,243 04	21,237 69	2,994 65	.....	397
281 59	3,991 15	4,104 02	112 87	.....	398
153 98	2,185 09	2,332 53	147 44	.....	399
2,988 90	37,440 03	38,205 74	765 71	.....	400
10,792 00	121,066 06	125,369 90	4,303 84	.....	401
3,498 70	25,145 30	37,589 65	12,444 35	.....	402
.....	.....	.....	.....	.....	405
994 89	11,132 57	13,636 38	2,503 81	.....	410
86 00	1,836 81	392 66	.....	1,444 15	411
.....	.....	.....	.....	.....	412
71 46	823 51	859 41	35 90	.....	413
2,335 15	1,691 73	4,025 29	2,333 56	.....	414
Cr. 62 40	3,298 83	3,452 76	153 93	.....	415
.....	210 05	.....	.....	210 05	416
105 07	281 88	330 07	48 19	.....	417
188 45	2,579 35	7,000 83	4,421 48	.....	418
7 75	75 81	94 92	19 11	.....	419
80 35	2,808 88	3,035 90	227 02	.....	420
85,326 52	842,058 75	985,452 19	143,393 44	.....	
948 99	14,397 12	17,422 83	3,025 71	.....	441
405 18	2,976 31	2,945 03	.....	31 28	447
1,029 47	10,848 72	13,053 80	2,205 08	.....	448
489 95	4,779 07	4,902 61	123 54	.....	449
897 69	9,561 67	9,500 42	.....	61 25	450
3,771 28	42,562 89	47,824 69	5,261 80	.....	

Comparative Statement of Earnings and Expenditures by

No.	General.	1915 November.	1916 November.	1915 December.	1916 December.
		$ c.	$ c.	$ c.	$ c.
451	Salaries and Expenses of General Officers	1,624 04	1,517 34	2,705 63	1,697 89
452	Salaries and Expenses of Clerks and Attendants	2,854 33	3,565 06	3,166 35	4,296 89
453	General Office Supplies and Expenses	414 96	813 51	744 07	806 85
454	Law Expenses	400 00	400 50	588 90	400 00
455	Insurance	90	12 52	1 93	10 00
457	Pensions	183 50	635 86	1,451 49	416 40
458	Stationery and Printing	192 14	354 23	434 96	398 52
459	Valuation Expenses				
460	Other Expenses	11 05	869 48	35 05	2,072 56
461	General Joint Facilities—Dr.				
462	" " " —Cr.	7 42	8 34	7 28	8 52
	Total	5,673 50	8,210 16	9,121 10	10,090 59

Comparative Statement of Earnings and Expenditures by

No.	General.	1916 April.	1917 April.	1916 May.	1917 May.
		$ c.	$ c.	$ c.	$ c.
451	Salaries and Expenses of General Officers	1,465 02	1,647 07	1,503 19	1,703 18
452	Salaries and Expenses of Clerks and Attendants	2,874 43	3,912 87	2,835 40	3,899 02
453	General Office Supplies and Expenses	469 45	809 71	729 78	850 24
454	Law Expenses	400 00	400 00	425 00	400 00
455	Insurance	78 95		1 87	78 75
457	Pensions	357 46	437 34	569 70	511 52
458	Stationery and Printing	328 61	632 69	346 87	369 02
459	Valuation Expenses				
460	Other Expenses	11 05	1,057 96	52 50	1,209 90
461	General Joint Facilities—Dr.				
462	" " " —Cr.	7 18	9 46	7 31	9 45
	Total	5,977 79	8,888 18	6,457 00	9,012 18

Comparative Statement of Earnings and Expenditures by

No.	General.	1916 September.	1917 September.	1916 October.
		$ c.	$ c.	$ c.
451	Salaries and Expenses of General Officers	2,381 00	1,853 24	1,481 32
452	Salaries and Expenses of Clerks and Attendants	3,500 85	4,057 96	3,550 01
453	General Office Supplies and Expenses	498 47	554 95	809 07
454	Law Expenses	400 00	400 00	562 89
455	Insurance	1 87		1 87
457	Pensions	1,175 74	37 50	870 46
458	Stationery and Printing	215 83	465 57	401 17
459	Valuation Expenses			
460	Other Expenses	3,193 88	1,219 76	2,564 30
461	General Joint Facilities —Dr.			
462	" " " —Cr.	8 66	9 35	8 42
	Total	11,358 98	8,579 63	10,232 67

Months, November, 1915, to October, 1917---Continued.

1916 January.	1917 January.	1916 February.	1917 February.	1916 March.	1917 March.	No.
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	
1,606 71	1,802 51	1 520 65	1,754 30	2,575 01	2,263 19	451
2,873 21	3,810 14	2,760 65	3,897 94	2,793 41	3,906 72	452
438 15	1,068 91	405 88	772 64	456 93	958 68	453
400 00	400 00	400 00	400 00	400 00	400 00	454
1 87	.....	1 87	.....	6 07	73 75	455
1,245 70	295 13	676 55	373 58	112 75	437 33	457
192 37	365 37	463 50	618 76	194 85	708 56	458
.....	.....	.....	.....	.....	.....	459
11 05	961 61	11 05	926 54	11 05	1,560 24	460
.....	.....	.....	.....	.....	.....	461
7 64	8 28	7 14	8 61	7 26	9 13	462
6,761 42	8,695 39	6,233 01	8,735 15	6,542 81	10,299 34	

Months November, 1915, to October, 1917---Continued.

1916 June.	1917 June.	1916 July.	1917 July.	1916 August.	1917 August.	No.
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	
2,180 55	2,324 80	1,521 31	1,883 43	1,544 39	1,661 51	451
2,903 32	3,764 52	3,042 40	4,069 52	3,339 54	4,040 55	452
384 50	1,034 30	410 26	617 63	366 74	488 98	453
650 65	400 00	400 00	561 30	400 00	400 00	454
1 87	.....	1 87	.....	1 87	.....	455
782 98	421 11	1,000 03	430 69	1,100 33	44 25	457
188 24	699 53	495 28	281 35	235 01	267 79	458
.....	.....	.....	.....	.....	.....	459
624 80	1,269 49	907 01	924 92	497 34	867 30	460
.....	.....	.....	.....	.....	.....	461
7 32	9 14	7 22	4 66	6 29	14 00	462
7,709 59	9,904 61	7,770 94	8,764 18	7,478 93	7,756 38	

Months, November, 1915, to October, 1917---Concluded.

1917 October.	1916 Total.	1917 Total.	Increase.	Decrease.	No.
$ c.	$ c.	$ c.	$ c.	$ c.	
1,448 07	22,108 82	21,556 53	.....	552 29	451
4,157 91	36,493 90	47,379 10	10,885 20	.....	452
809 35	6,128 26	9,585 75	3,457 49	.....	453
400 00	5,427 44	4,961 80	.....	465 64	454
.....	102 81	175 02	72 21	.....	455
.....	9,526 69	4,090 71	.....	5,435 98	457
656 55	3,688 83	5,817 94	2,129 11	.....	458
.....	.....	.....	.....	.....	459
856 32	7,930 13	13,796 08	5,865 95	.....	460
.....	.....	.....	.....	.....	461
8 94	89 14	107 88	18 74	.....	462
8,319 26	91,317 74	107,255 05	15,937 31	.....	

Comparative Statement—Earnings and Expenses—Freight and Passenger—per Train Mile and per Mile of Road

November, 1916-1915

	Total.		Freight.		Passenger.		Per Train Mile.			
							Freight.		Passenger.	
	1916	1915	1916	1915	1916	1915	1916	1915	1916	1915
Train Miles	97,052	84,030	52,937	40,760	44,115	43,270	.....	.....	.....	.....
Car Miles—Loaded	937,688	768,174	700,339	552,109	237,349	216,065	13.2	13.5	5.4	5.0
" " Empty	255,259	237,256	255,259	237,256	.....	.....	4.8	5.8	.....	.....
Total Car Miles	1,192,947	1,005,430	955,598	789,365	237,349	216,065	18.0	19.3	5.4	5.0
REVENUE.										
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Transportation	174,228 07	148,604 21	111,687 49	98,293 74	62,540 58	50,310 47	2 11.	2 41.1	1.41.8	1 16.3
Incidental to transportation	7,777 46	5,862 86	4,450 70	3,702 12	3,326 76	2,160 74	08.4	09.1	07.5	05.
Total	182,005 53	154,467 07	116,138 19	101,995 86	65,867 34	52,471 21	2 19.4	2 50.2	1 49.3	1 21.3
EXPENDITURES.										
Maintenance of Way and Structures	34,470 73	36,819 46	20,751 38	20,508 44	13,719 35	16,311 02	39.2	50.3	31.1	37.7
" " Equipment	24,913 07	23,272 14	11,984 60	10,680 80	12,928 47	12,591 34	22.7	26.2	29.3	29.1
Traffic Expenses	1,054 05	1,603 10	652 75	1,151 28	401 30	451 82	1.2	02.8	00.9	01.0
Transportation Expenses	82,130 19	58,340 34	55,948 72	36,499 63	26,181 47	21,840 71	1 05.7	89.5	59.3	50.5
Miscellaneous Operations	3,495,36	2,551 09	1,429 00	1,286 11	2,066 36	1,264 98	02.7	03.2	04.7	02.9
General Expenses	8,210 16	5,673 50	5,098 51	3,245 24	3,111 65	2,428 26	09.6	08.0	07.1	05.6
Transportation for Investment—*Cr.*	177 61	201 12	177 61	201 12	.....	.....	00.3	00.5	.....	.....
Total Operating Expenses	154,095 95	128,058 51	95,687 35	73,170 38	58,408 60	54,888 13	1 80.8	1 79.5	1 32.4	1 26.8
Hire of Equipment	8,457 91	6,744 31	6,997 77	4,939 16	1,460 14	1,805 15	13.2	12.1	03.3	04.2
Total Expenses	162,553 86	134,802 82	102,685 12	78,109 54	59,868 74	56,693 28	1 94.	1 91.6	1 35.7	1 31.0
Balance	19,451 67	19,664 25	13,453 07	23,886 32	5,998 60	Dr. 4,222 07	25.4	58.6	13.6	Dr. 09.7
Income unallocated	4,041 26	1,791 75	.....	.....	.....	.....	.....	.....	.....	.....
Net Result	23,492 93	21,456 00	.....	.....	.....	.....	.....	.....	.....	.....

Per Mile of Road

Revenue.	Total.		Freight.		Passenger.	
	1916	1915	1916	1915	1916	1915
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Transportation	530 37	452 37	339 99	299 22	190 38	153 15
Incidental to Transportation	23 68	17 85	13 55	11 27	10 13	6 58
Total	554 05	470 22	353 54	310 49	200 51	159 73
Expenditures.						
Maintenance of Way and Structures	104 93	112 08	63 17	62 43	41 76	49 65
Maintenance of Equipment	75 84	70 84	36 48	32 51	39 36	38 33
Traffic Expenses	3 21	4 88	1 99	3 50	1 22	1 38
Transportation Expenses	250 02	177 60	170 32	111 11	79 70	66 49
Miscellaneous Operations	10 64	7 77	4 35	3 92	6 29	3 85
General Expenses	24 99	17 27	15 52	9 88	9 47	7 39
Transportation for Investment—Cr.	54	61	54	61	.....	.....
Total Operating Expenses	469 09	389 83	291 29	222 74	177 80	167 09
Hire of Equipment	25 75	20 53	21 30	15 04	4 45	5 49
Total Expenses	494 84	410 36	312 59	237 78	182 25	172 58
Balance	59 21	59 86	40 95	72 71	18 26	Dr. 12 85
Income unallocated	12 30	5 45	.....	.....	.....	.....
Net Result	71 51	65 31	.....	.....	.....	.....

Comparative Statement—Earnings and Expenses—Freight and Passenger—per Train Mile and per Mile of Road, December, 1916-1915

	Total.		Freight.		Passenger.		Per Train Mile. Freight.		Per Train Mile. Passenger.	
	1916	1915	1916	1915	1916	1915	1916	1915	1916	1915
Train Miles	94,117	89,553	49,442	44,006	44,675	45,547	.....	.....	.....	.....
Car Miles—Loaded	984,615	818,872	736,939	584,709	247,676	234,163	14.9	13.3	5.5	5.1
" " Empty	244,074	239,327	244,074	239,327	.....	.....	4.9	5.4	.....	.....
Total Car Miles	1,228,689	1,058,199	981,013	824,036	247,676	234,163	19.8	18.7	5.5	5.1
REVENUE.										
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Transportation	180,628 76	154,810 69	118,618 21	103,244 87	62,010 55	51,565 82	2 39.9	2 34.6	1 38.8	1 13.2
Incidental to Transportation	10,500 75	6,105 58	5,586 65	3,975 78	4,914 10	2,129 80	11.3	09.	11.	04.7
Total	191,129 51	160,916 27	124,204 86	107,220 65	66,924 65	53,695 62	2 51.2	2 43.6	1 49.8	1 17.9
EXPENDITURES.										
Maintenance of Way and Structures	35,020 85	29,981 46	20,452 18	17,119 41	14,568 67	12,862 05	41.4	38.9	32.6	28.2
" " Equipment	27,915 51	21,829 87	13,137 82	9,611 63	14,777 69	12,218 24	26.6	21.8	33.1	26.8
Traffic Expenses	1,868 80	2,536 47	729 69	1,277 88	1,139 11	1,258 59	01.5	02.9	02.5	02.8
Transportation Expenses	85,310 66	63,818 19	57,778 41	40,671 23	27,532 25	23,146 96	1 16.8	92.4	61.6	50.8
Miscellaneous Operations	5,748 27	3,286 55	1,678 53	1,371 01	4,069 74	1,915 54	03.4	03.1	09.1	04.2
General Expenses	10,090 59	9,121 10	6,074 54	5,262 87	4,016 05	3,858 23	12.3	12.	09.0	08.5
Transportation for Investment—*Cr.*	150 86	136 95	150 86	136 95	.....	.....	00.3	00.3	.....	.....
Total Operating Expenses	165,803 82	130,436 69	99,700 31	75,177 08	66,103 51	55,259 61	2 01.7	1 70.8	1 47.9	1 21.3
Hire of Equipment	12,875 68	6,476 22	11,727 48	5,236 24	1,148 20	1,239 98	23.7	11.9	02.6	02.7
Total Expenses	178,679 50	136,912 91	111,427 79	80,413 32	67,251 71	56,499 59	2 25.4	1 82.7	1 50.5	1 24.
Balance	12,450 01	24,003 36	12,777 07	26,807 33	Dr. 327 06	Dr. 2,803 97	25.8	60.9	Dr. 00.7	Dr. 06.1
Income unallocated	1,982 54	2,563 94	.....	.....	.....	.....	.....	.....	.....	.....
Net Result	14,432 55	26,567 30	.....	.....	.....	.....	.....	.....	.....	.....

Per Mile of Road

Revenue.	Total.		Freight.		Passenger.	
	1916	1915	1916	1915	1916	1915
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Transportation	549 86	471 26	361 09	314 29	188 77	156 97
Incidental to Transportation	31 97	18 59	17 01	12 10	14 96	6 49
Total	581 83	489 85	378 10	326 39	203 73	163 46
Expenditures.						
Maintenance of Way and Structures	106 61	91 27	62 26	52 12	44 35	39 15
Maintenance of Equipment	84 98	66 45	39 99	29 26	44 99	37 19
Traffic Expenses	5 69	7 72	2 22	3 89	3 47	3 83
Transportation Expenses	259 70	194 27	175 89	123 81	83 81	70 46
Miscellaneous Operations	17 50	10 01	5 11	4 17	12 39	5 84
General Expenses	30 71	27 77	18 49	16 02	12 22	11 75
Transportation for Investment—*Cr.*	46	42	46	42	.....	.....
Total Operating Expenses	504 73	397 07	303 50	228 85	201 23	168 22
Hire of Equipment	39 20	19 71	35 70	15 94	3 50	3 77
Total Expenses	543 93	416 78	339 20	244 79	204 73	171 99
Balance	37 90	73 07	38 90	81 60	Dr. 1 00	Dr. 8 53
Income unallocated	6 04	7 80	.....	.....	.....	.....
Net Result	43 94	80 87	.....	.....	.....	.....

Comparative Statement—Earnings and Expenses—Freight and Passenger—per Train Mile and per Mile of Road.
January, 1917-1916.

	Total.		Freight.		Passenger.		Per Train Mile.			
							Freight.		Passenger.	
	1917	1916	1917	1916	1917	1916	1917	1916	1917	1916
Train Miles	93,902	89,263	48,429	46,033	45,473	43,230	.....	.....	.....	.....
Car Miles—Loaded	882,129	854,240	638,732	651,732	243,397	202,508	13.2	14.2	5.4	4.7
" " Empty	217,657	227,666	217,657	227,666	.....	.....	4.5	4.9	.....	.....
Total Car Miles	1,099,786	1,081,906	856,389	879,398	243,397	202,508	17.7	19.1	5.4	4.7
REVENUE.										
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Transportation	166,019 53	139,236 13	112,273 02	94,046 09	53,746 51	45,190 04	2 31.8	2.04	1 18.2	1.05
Incidental to Transportation	11,120 02	8,881 44	5,912 78	4,500 84	5,207 24	4,380 60	12.2	.10	11.4	10
Total	177,139 55	148,117 57	118,185 80	98,546 93	58,953 75	49,570 64	2 44.	2.14	1 29.6	1.15
EXPENDITURES.										
Maintenance of Way and Structures	29,616 11	31,501 12	16,821 95	18,900 68	12,794 16	12,600 44	34.7	.41	28.1	.29
" " Equipment	29,775 06	23,232 31	13,069 76	11,852 12	16,705 30	11,380 19	27.	.26	36.8	.27
Traffic Expenses	1,622 84	3,013 91	975 15	1,161 59	647 69	1,852 32	2.	.03	1.4	.04
Transportation Expenses	85,087 06	76,280 49	56,203 19	50,743 58	28,883 87	25,536 91	1.16.	1.10	63.5	.59
Miscellaneous Operations	7,438 36	4,975 78	1,605 74	1,475 30	5,832 62	3,500 48	3.3	.03	12.8	.08
General Expenses	8,695 39	6,761 42	5,025 94	4,090 66	3,669 45	2,670 76	10.4	.09	8.1	.06
Transportation for Investment—*Cr.*	17 70	35 86	17 70	35 86	.....	.....	.....	.....	.....	.....
Total Operating Expenses	162,217 12	145,729 17	93,684 03	88,188 07	68,533 09	57,541 10	1 93.4	1.92	1 50.7	1.33
Hire of Equipment	9,879 28	8,925 84	8,906 20	7,489 27	973 08	1,436 57	18.4	.16	2.1	.03
Total Expenses	172,096 40	154,655 01	102,590 23	95,677 34	69,506 17	58,977 67	2 11.8	2.08	1 52.8	1.36
Balance	5,043 15	Dr. 6,537 44	15,595 57	2,869 59	Dr.10,552 42	Dr. 9,407 03	32.2	.06	Dr. 23.2	Dr. .21
Income unallocated	19,793 99	10,172 08	.....	.....	.....	.....	.....	.....	.....	.....
Net Result	24,837 14	3,634 64	.....	.....	.....	.....	.....	.....	.....	.....

Per Mile of Road

Revenue.	Total		Freight.		Passenger.	
	1917	1916	1917	1916	1917	1916
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Transportation	505 39	423 85	341 78	286 29	163 61	137 56
Incidental to Transportation	33 85	27 04	18 00	13 70	15 85	13 34
Total	539 24	450 89	359 78	299 99	179 46	150 90
Expenditures.						
Maintenance of Way and Structures	90 15	95 89	51 20	57 53	38 95	38 36
Maintenance of Equipment	90 64	70 72	39 79	36 08	50 85	34 64
Traffic Expenses	4 94	9 18	2 97	3 54	1 97	5 64
Transportation Expenses	259 02	232 21	171 09	154 48	87 93	77 73
Miscellaneous Operations	22 64	15 15	4 89	4 49	17 75	10 66
General Expenses	26 47	20 58	15 30	12 45	11 17	8 13
Transportation for Investment—*Cr.*	05	11	05	11	.....	.....
Total Operating Expenses	493 81	443 62	285 19	268 46	208 62	175 16
Hire of Equipment	30 08	27 17	27 11	22 79	2 97	4 38
Total Expenses	523 89	470 79	312 30	291 25	211 59	179 54
Balance	15 35	Dr.19 90	47 48	8 74	Dr. 32 13	Dr. 28.64
Income unallocated	60 26	30 96	.....	.....	.....	.....
Net Result	75 61	11 06	.....	.....	.....	.....

Comparative Statement—Earnings and Expenses—Freight and Passenger—per Train Mile and per Mile of Road
February, 1917-1916

	Total.		Freight.		Passenger.		Per Train Mile.			
							Freight.		Passenger.	
	1917	1916	1917	1916	1917	1916	1917	1916	1917	1916
Train Miles	80,594	89,851	40,930	48,664	39,664	41,187	.....	.....	.....	.....
Car Miles—Loaded	803,386	946,929	608,271	755,748	195,115	191,181	14.9	15.5	4.9	4.6
" " Empty	153,009	233,367	153,009	233,367	.....	.....	3.7	4.8	.....	.....
Total Car Miles	956,395	1,180,296	761,280	989,115	195,115	191,181	18.6	20.3	4.9	4.6
REVENUE.										
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Transportation	138,853 50	144,254 30	96,012 33	107,785 07	42,841 17	36,469 23	2 34.6	2 21.	1 08.	.89
Incidental to Transportation	9,265 29	6,334 49	5,659 88	3,737 17	3,605 41	*2,597 32	13.8	08.	09.1	.06
Total	148,118 79	150,588 79	101,672 21	111,522 24	46,446 58	39,066 55	2 48.4	2 29.	1 17.1	.95
EXPENDITURES.										
Maintenance of Way and Structures	31,516 86	35,310 60	18,248 26	22,192 71	13,268 60	13,117 89	44.6	.45	33.5	.32
" " Equipment	29,444 04	24,491 27	15,791 17	13,465 14	13,652 87	11,026 13	38.6	.28	34.4	.27
Traffic Expenses	1,542 07	1,902 02	642 15	1,443 61	899 92	458 41	01.5	.03	02.3	.01
Transportation Expenses	*86,860 41	77,691 60	55,317 12	54,514 31	31,543 29	23,177 29	1 35.1	1.12	79.5	.56
Miscellaneous Operations	3,854 75	3,316 32	1,501 29	1,396 42	2,353 46	1,919 90	03.7	.03	05.9	.05
General Expenses	8,735 15	6,233 01	5,214 88	4,063 92	3,520 27	2,169 09	12.7	.08	08.9	.05
Transportation for Investment—*Cr.*	70 00	25 32	70 00	25 32	.....	.....	00.1	.....	.....	.....
Total Operating Expenses	161,883 28	148,919 50	96,644 87	97,050 79	65,238 41	51,868 71	2 36.1	1.99	1 64.5	1.26
Hire of Equipment	7,166 40	11,119 16	7,653 64	9,796 91	Cr. 487 24	1,322 25	18.7	.20	Cr. 01.2	.03
Total Expenses	169,049 68	160,038 66	104,298 51	106,847 70	64,751 17	53,190 96	2 54.8	2.19	1 63.3	1.29
Balance	Dr.20,930 89	Dr. 9,449 87	Dr. 2,626 30	4,674 54	Dr.18,304 59	Dr.14,124 41	Dr. 06.4	.10	46.2	Dr. .34
Income unallocated	2,231 18	1,516 85	.....	.....	.....	.....	.....	.....	.....	.....
Net Result	Dr. 18,699 71	Dr.7,933 02	.....	.....	.....	.....	.....	.....	.....	.....

Per Mile of Road

Revenue.	Total.		Freight.		Passenger.	
	1917	1916	1917	1916	1917	1916
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Transportation	422 69	439 12	292 28	328 11	130 41	111 01
Incidental to Transportation	28 20	19 29	17 22	11 38	10 98	7 91
Total	450 89	458 41	309 50	339 49	141 39	118 92
Expenditures.						
Maintenance of Way and Structures	95 94	107 49	55 55	67 56	40 39	39 93
Maintenance of Equipment	89 63	74 55	48 07	40 99	41 56	33 56
Traffic Expenses	4 69	5 79	1 95	4 39	2 74	1 40
Transportation Expenses	264 42	236 50	168 40	165 95	96 02	70 55
Miscellaneous Operations	11 73	10 10	4 57	4 25	7 16	5 85
General Expenses	26 59	18 97	15 87	12 37	10 72	6 60
Transportation for Investment—*Cr.*	21	07	21	07	.....	.....
Total Operating Expenses	492 79	453 33	294 20	295 44	198 59	157 89
Hire of Equipment	21 82	33 85	23 30	29 82	Cr. 1 48	4 03
Total Expenses	514 61	487 18	317 50	325 26	197 11	161 92
Balance	Dr. 63 72	Dr. 28 77	Dr. 8 00	14 23	Dr. 55 72	Dr. 43 00
Income unallocated	6 79	4 62	.....	.....	.....	.....
Net Result	Dr. 56 93	Dr. 24 15	.....	.....	.....	.....

Comparative Statement—Earnings and Expenses—Freight and Passenger—per Train Mile and per Mile of Road. March, 1917-1916.

	Total.		Freight.		Passenger.		Per Train Mile.			
							Freight.		Passenger.	
	1917	1916	1917	1916	1917	1916	1917	1916	1917	1916
Train Miles	83,921	110,881	45,638	65,210	38,283	45,671	.....	.....	.....	.....
Car Miles—Loaded	890,363	1,328,514	692,711	1,113,275	197,652	215,239	15.2	17.1	5.2	4.7
" " Empty	148,327	233,949	148,327	233,949	.....	.....	3.2	3.6	.....	.....
Total Car Miles	1,038,690	1,562,463	841,038	1,347,224	197,652	215,239	18.4	20.7	5.2	4.7
REVENUE.										
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Transportation	174,491 74	187,127 43	123,011 82	142,667 04	51,479 92	44,460 39	2 69.5	2 18.8	1 34.5	97.3
Incidental to Transportation	7,341 71	6,776 17	4,964 15	4,328 09	2,377 56	2,448 08	10.9	06.6	6.2	05.4
Total	181,833 45	193,903 60	127,975 97	146,995 13	53,857 48	46,908 47	2 80.4	2.25.4	1 40.7	1 02.7
EXPENDITURES.										
Maintenance of Way and Structures	40,267 32	31,221 35	24,079 86	21,261 74	16,187 46	9,959 61	52.8	32.6	42.3	21.8
" " Equipment	28,134 50	30,903 33	13,323 53	16,323 12	14,810 97	14,580 21	29.2	25.	38.7	31.9
Traffic Expenses	1,646 24	1,441 97	882 63	1,144 31	763 61	297 66	01.9	01.8	02.	00.7
Transportation Expenses	91,232 28	94,015 46	61,193 26	70,815 57	30,039 02	23,199 89	1 34.1	1 08.6	78.5	50.8
Miscellaneous Operations	2,550 94	3,852 12	1,760 38	1,842 67	790 56	2,009 45	03.9	02.8	02.	04.4
General Expenses	10,299 34	6,542 81	6,364 99	4,514 54	3,934 35	2,028 27	13.9	06.9	10.3	04.4
Transportation for Investment—*Cr.*	.....	30 88	.....	30 88	.....	.....	.....	.....	.....	.....
Total Operating Expenses	174,130 62	167,946 16	107,604 65	115,871 07	66,525 97	52,075 09	2 35.8	1 77.7	1 73.8	1 14.
Hire of Equipment	8,493 70	16,690 23	8,927 31	14,991 68	Cr. 433 61	1,698 55	19.5	23.	Cr. 01.1	03.7
Total Expenses	182,624 32	184,636 39	116,531 96	130,862 75	66,092 36	53,773 64	2 55.3	2 00.7	1 72 7	1 17.7
Balance	Dr. 790 87	9,267 21	11,444 01	16,132 38	Dr.12,234 88	Dr. 6,865 17	25.1	24.7	Dr. 32.	Dr. 15.
Income unallocated	2,745 40	8,333 56	.....	.....	.....	.....	.....	.....	.....	.....
Net Result	1,954 53	17,600 77	.....	.....	.....	.....	.....	.....	.....	.....

Per Mile of Road

Revenue.	Total.		Freight.		Passenger.	
	1917	1916	1917	1916	1917	1916
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Transportation	531 18	569 64	374 47	434 30	156 71	135 34
Incidental to Transportation	22 35	20 63	15 11	13 18	7 24	7 45
Total	553 53	590 27	389 58	447 48	163 95	142 79
Expenditures.						
Maintenance of Way and Structures	122 58	95 04	73 30	64 72	49 28	30 32
Maintenance of Equipment	85 64	94 07	40 56	49 69	45 08	44 38
Traffic Expenses	5 01	4 39	2 69	3 48	2 32	91
Transportation Expenses	277 72	286 20	186 28	215 57	91 44	70 63
Miscellaneous Operations	7 77	11 72	5 36	5 61	2 41	6 11
General Expenses	31 35	19 92	19 37	13 75	11 98	6 17
Transportation for Investment—*Cr.*	.....	09	.....	09	.....	.....
Total Operating Expenses	530 07	511 25	327 56	352 73	202 51	158 52
Hire of Equipment	25 86	50 81	27 18	45 64	Cr. 1 32	5 17
Total Expenses	555 93	562 06	354 74	398 37	201 19	163 69
Balance	Dr. 2 40	28 21	34 84	49 11	Dr. 37 24	Dr. 20 90
Income unallocated	8 35	25 37	.....	.....	.....	.....
Net Result	5 95	53 58	.....	.....	.....	.....

Comparative Statement—Earnings and Expenses—Freight and Passenger—per Train Mile and per Mile of Road. April, 1917-1916

	Total.		Freight.		Passenger.		Per Train Mile.			
							Freight.		Passenger.	
	1917	1916	1917	1916	1917	1916	1917	1916	1917	1916
Train Miles	90,582	120,530	53,879	79,627	36,703	40,903	.....	.....	.....	.....
Car Miles—Loaded	1,151,765	1,528,996	944,314	1,313,224	207,451	215,772	17.5	16.5	5.7	5.3
" " Empty	214,466	430,975	214,466	430,975	.....	.....	4.	5.4	.....	.....
Total Car Miles	1,366,231	1,959,971	1,158,780	1,744,199	207,451	215,772	21.5	21.9	5.7	5.3
REVENUE.										
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Transportation	205,504 44	226,708 36	142,306 41	174,593 27	63,198 03	52,115 09	2 64.1	2 19.3	1 72.2	1 27.4
Incidental to Transportation	7,931 39	6,840 83	5,668 37	5,137 90	2,263 02	1,702 93	10.5	06.4	06.1	04.2
Total	213,435 83	233,549 19	147,974 78	179,731 17	65,461 05	53,818 02	2 74.6	2 25.7	1 78.3	1 31.6
EXPENDITURES.										
Maintenance of Way and Structures	27,120 27	28,388 98	17,818 02	19,332 90	9,302 25	9,056 08	33.1	24.3	25.3	22.1
Miscellaneous Equipment	24,866 89	25,101 54	10,165 62	14,917 20	14,701 27	10,184 34	18.9	18.7	40.1	24.9
Traffic Expenses	1,074 55	1,237 48	652 57	1,059 91	421 98	177 57	01.2	01.3	01.2	00.4
Transportation Expenses	88,194 33	94,139 11	62,102 27	73,298 87	26,092 06	20,840 24	1 15.2	92.1	71.1	51.
Miscellaneous Operations	3,134 93	2,091 37	2,100 15	1,506 57	1,034 78	584 80	03.9	01.9	02.8	01.4
General Expenses	8,888 18	5,977 79	5,715 10	4,357 81	3,173 08	1,619 98	10.6	05.4	08.6	04.
Transportation for Investment—*Cr.*	16 55	35 95	16 55	35 95	.....	.....	.....	.....	.....	.....
Total Operating Expenses	153,262 60	156,900 32	98,537 18	114,437 31	54,725 42	42,463 01	1 82.9	1 43.7	1 49.1	1 03.8
Hire of Equipment	9,181 15	18,107 91	9,642 57	16,304 03	Cr. 461 42	1,803 88	17.9	20.5	Cr. 01.3	04.4
Total Expenses	162,443 75	175,008 23	108,179 75	130,741 34	54,264 00	44,266 89	2 00.8	1 64.2	1 47.8	1 08.2
Balance	50,992 08	58,540 96	39,795 03	48,989 83	11,197 05	9,551 13	73.8	61.5	30.5	23.4
Income unallocated	15,632 50	2,169 10	.....	.....	.....	.....	.....	.....	.....	.....
Net Result	66,624 58	60,710 06	.....	.....	.....	.....	.....	.....	.....	.....

Per Mile of Road

Revenue.	Total.		Freight.		Passenger.	
	1917	1916	1917	1916	1917	1916
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Transportation	625 59	690 13	433 21	531 49	192 38	158 64
Incidental to Transportation	24 14	20 83	17 25	15 64	6 89	5 19
Total	649 73	710 96	450 46	547 13	199 27	163 83
Expenditures.						
Maintenance of Way and Structures	82 56	86 42	54 24	58 85	28 32	27 57
Maintenance of Equipment	75 70	76 41	30 95	45 41	44 75	31 00
Traffic Expenses	3 27	3 77	1 98	3 23	1 29	54
Transportation Expenses	268 47	286 57	189 05	223 13	79 42	63 44
Miscellaneous Operations	9 54	6 37	6 39	4 59	3 15	1 78
General Expenses	27 06	18 20	17 40	13 27	9 66	4 93
Transportation for Investment—*Cr.*	05	11	05	11	.....	.....
Total Operating Expenses	466 55	477 63	299 96	348 37	166 59	129 26
Hire of Equipment	27 95	55 12	29 35	49 63	Cr. 1 40	5 49
Total Expenses	494 50	532 75	329 31	398 00	165 19	134 75
Balance	155 23	178 21	121 15	149 13	34 08	29 08
Income unallocated	47 58	6 60	.....	.....	.....	.....
Net Result	202 81	184 81	.....	.....	.....	.....

Comparative Statement—Earnings and Expenses—Freight and Passenger—per Train Mile and per Mile of Road.
May, 1917-1916.

	Total.		Freight.		Passenger.		Per Train Mile.			
							Freight.		Passenger.	
	1917	1916	1917	1916	1917	1916	1917	1916	1917	1916
Train Miles	87,658	100,247	48,814	52,817	38,844	47,430	.....	.....	.....	.....
Car Miles—Loaded	994,033	1,039,614	786,553	794,237	207,480	245,377	16.1	15.	5.3	5.2
" " Empty	222,461	329,596	222,461	329,596	.....	.....	4.6	6.3	.....	.....
Total Car Miles	1,216,494	1,369,210	1,009,014	1,123,833	207,480	245,377	20.7	21.3	5.3	5.2
REVENUE.										
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Transportation	205,290 32	192,425 87	143,914 88	130,417 33	61,375 44	62,008 54	2 94.8	2 46.9	1 58.	1 30.7
Incidental to Transportation	10,146 72	7,909 01	6,661 68	4,771 12	3,485 04	3,137 89	13.6	09.	08.9	06.6
Total	215,437 04	200,334 88	150,576 56	135,188 45	64,860 48	65,146 43	3 08.4	2 55.9	1 66.9	1 37.3
EXPENDITURES.										
Maintenance of Way and Structures	27,160 56	33,152 63	17,165 47	20,355 71	9,995 09	12,796 92	35.2	38.5	25.7	27.
" " Equipment	24,543 24	22,250 15	11,790 28	12,126 14	12,752 96	10,124 01	24.2	23.	32.8	21.3
Traffic Expenses	1,330 00	1,519 95	792 25	1,192 74	537 75	327 21	01.6	02.3	01.4	00.7
Transportation Expenses	76,692 99	73,215 82	51,324 94	50,670 05	25,368 05	22,545 77	1 05.2	95.9	65.3	47.5
Miscellaneous Operations	3,547 68	3,784 25	1,422 51	1,658 54	2,125 17	2,125 71	02.9	03.1	05.5	04.5
General Expenses	9,012 18	6,457 00	5,578 54	4,145 39	3,433 64	2,311 61	11.4	07.8	08.8	04.9
Transportation for Investment—*Cr.*	26 66	368 95	26 66	368 95	.....	.....	00.1	00.7	.....	.....
Total Operating Expenses	142,259 99	140,010 85	88,047 33	89,779 62	54,212 66	50,231 23	1 80.4	1.69.9	1 39.5	1.05.9
Hire of Equipment	4,035 23	9,594 18	3,919 71	7,019 91	115 52	2,574 27	08.	13.3	00.3	05.4
Total Expenses	146,295 22	149,605 03	91,967 04	96,799 53	54,328 18	52,805 50	1 88.4	1 83.2	1 39.8	1 11.3
Balance	69,141 82	50,729 85	58,609 52	38,388 92	10,532 30	12,340 93	1 20.	72.7	27.1	26.
Income unallocated	3,264 99	2,570 98	.....	.....	.....	.....	.....	.....	.....	.....
Net Result	72,406 81	53,300 83	.....	.....	.....	.....	.....	.....	.....	.....

Per Mile of Road

Revenue.	Total.		Freight.		Passenger.	
	1917	1916	1917	1916	1917	1916
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Transportation	624 93	585 77	438 10	397 01	186 83	188 76
Incidental to Transportation	30 89	24 08	20 28	14 52	10 61	9 56
Total	655 82	609 85	458 38	411 53	197 44	198 32
Expenditures.						
Maintenance of Way and Structures	82 68	100 92	52 26	61 96	30 42	38 96
Maintenance of Equipment	74 71	67 73	35 89	36 91	38 82	30 82
Traffic Expenses	4 05	4 63	2 41	3 63	1 64	1 00
Transportation Expenses	233 46	222 88	156 24	154 25	77 22	68 63
Miscellaneous Operations	10 80	11 52	4 33	5 05	6 47	6 47
General Expenses	27 44	19 65	16 98	12 62	10 46	7 03
Transportation for Investment—*Cr.*	08	1 12	08	1 12	.....	.....
Total Operating Expenses	433 06	426 21	268 03	273 30	165 03	152 91
Hire of Equipment	12 28	29 21	11 93	21 37	35	7 84
Total Expenses	445 34	455 42	279 96	294 67	165 38	160 75
Balance	210 48	154 43	178 42	116 86	32 06	37 57
Income unallocated	9 94	7 83	.....	.....	.....	.....
Net Result	220 42	162 26	.....	.....	.....	.....

Comparative Statement—Earnings and Expenses—Freight and Passenger—per Train Mile and per Mile of Road June, 1917-1916.

	Total.		Freight.		Passenger.		Per Train Mile.			
							Freight.		Passenger.	
	1917	1916	1917	1916	1917	1916	1917	1916	1917	1916
Train Miles	82,921	87,536	45,126	42,089	37,795	45,447	.....	.....	.....	.....
Car Miles—Loaded	872,135	851,508	669,295	601,850	202,840	249,658	14.8	14.3	5.4	5.5
" " Empty	212,330	204,213	212,330	204,213	.....	.....	4.7	4.9		
Total Car Miles	1,084,465	1,055,721	881,625	806,063	202,840	249,658	19.5	19.2	5.4	5.5
REVENUE.										
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Transportation	185,461 73	158,813 52	120,411 86	92,617 53	65,049 87	66,195 99	2 66.8	2 20.1	1 72.1	1 45.6
Incidental to Transportation	10,840 30	6,532 97	7,075 83	3,774 83	3,764 47	2,758 14	15.7	08.9	09.9	06.1
Total	196,302 03	165,346 49	127,487 69	96,392 36	68,814 34	68,954 13	2 82.5	2 29.	1 82.	1 51.7
EXPENDITURES.										
Maintenance of Way and Structures	34,039 99	37,065 95	20,832 47	18,162 32	13,207 52	18,903 63	46.2	43.1	35.	41.6
" " Equipment	24,706 52	21,341 88	14,456 02	9,402 82	10,250 50	11,939 06	32.	22.3	27.1	26.3
Traffic Expenses	1,050 34	1,691 90	620 33	1,065 53	430 01	626 37	01.4	02.5	01.1	01.4
Transportation Expenses	75,356 40	58,624 87	50,291 22	38,010 63	25,065 18	20,614 24	1.11.4	90.3	66.3	45.4
Miscellaneous Operations	4,333 73	2,257 47	1,705 34	1,369 66	2,628 39	887 81	03.8	03.3	07.	01.9
General Expenses	9,904 61	7,709 59	6,239 90	4,332 79	3,664 71	3,376 80	13.8	10.3	09.7	07.4
Transportation for Investment—*Cr.*	33 53	226 53	33 53	226 53	.....	.....	00.1	00.5	.....	.....
Total Operating Expenses	149,358 06	128,465 13	94,111 75	72,117 22	55,246 31	56,347 91	2 08.5	1 71.3	1 46.2	1 24.
Hire of Equipment	5,127 93	7,417 53	5,447 07	5,122 82	Cr. 319 14	2,294 71	12.1	12.2	Cr. 00.9	05.
Total Expenses	154,485 99	135,882 66	99,558 82	77,240 04	54,927 17	58,642 62	2 20.6	1 83.5	1 45.3	1 29.
Balance	41,816 04	29,463 83	27,928 87	19,152 32	13,887 17	10,311 51	61.9	45.5	36.7	22.7
Income unallocated	34,513 68	2,712 66	.....	.....	.....	.....	.....	.....	.....	.....
Net Result	76,329 72	32,176 49	.....	.....	.....	.....	.....	.....	.....	.....

Per Mile of Road

Revenue.	Total.		Freight.		Passenger.	
	1917	1916	1917	1916	1917	1916
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Transportation	564 57	483 45	366 55	281 94	198 02	201 51
Incidental to Transportation	33 00	19 88	21 54	11 49	11 46	8 39
Total	597 57	503 33	388 09	293 43	209 48	209 90
Expenditures.						
Maintenance of Way and Structures	103 62	112 83	63 42	55 29	40 20	57 54
Maintenance of Equipment	75 21	64 97	44 01	28 62	31 20	36 35
Traffic Expenses	3 20	5 15	1 89	3 24	1 31	1 91
Transportation Expenses	229 40	178 46	153 09	115 71	76 31	62 75
Miscellaneous Operations	13 19	6 87	5 19	4 17	8 00	2 70
General Expenses	30 15	23 47	18 99	13 19	11 16	10 28
Transportation for Investment—*Cr.*	10	69	10	69	.....	.....
Total Operating Expenses	454 67	391 06	286 49	219 53	168 18	171 53
Hire of Equipment	15 61	22 58	16 58	15 59	Cr. 97	6 99
Total Expenses	470 28	413 64	303 07	235 12	167 21	178 52
Balance	127 29	89 69	85 02	58 31	42 27	31 38
Income unallocated	105 06	8 25	.....	.....	.....	.....
Net Result	232 35	97 94	.....	.....	.....	.....

Comparative Statement—Earnings and Expenses—Freight and Passenger—per Train Mile and per Mile of Road
July, 1917-1916.

	Total.		Freight.		Passenger.		Per Train Mile.			
							Freight.		Passenger.	
	1917	1916	1917	1916	1917	1916	1917	1916	1917	1916
Train Miles	85,743	87,169	42,462	41,185	43,281	45,984	.....	.....	.....	.....
Car Miles—Loaded	905,131	792,322	675,373	563,324	229,758	228,998	15.9	13.7	5.3	5.0
" " Empty	192,776	170,057	192,776	170,057	.....	.....	4.5	4.1	.....	.....
Total Car Miles	1,097,907	962,379	868,149	733,381	229,758	228,998	20.4	17.8	5.3	5.0
REVENUE.										
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Transportation	175,687 81	150,103 72	110,751 60	78,919 01	64,936 21	71,184 71	2 60.8	1 91.6	1 50	1 54.8
Incidental to Transportation	7,169 87	8,013 07	4,490 75	3,891 96	2,679 12	4,121 11	10.6	09.5	06.2	09.0
Total	182,857 68	158,116 79	115,242 35	82,810 97	67,615 33	75,305 82	2 71.4	2 01.1	1 56.2	1 63.8
EXPENDITURES.										
Maintenance of Way and Structures	35,810 89	20,808 64	20,340 59	11,236 67	15,470 30	9,571 97	47.9	27.3	35.7	20.9
" " Equipment	20,225 35	12,603 59	9,166 52	4,703 06	11,058 83	7,900 53	21.6	11.4	25.5	17.2
Traffic Expenses	1,615 31	1,520 49	848 80	631 69	766 51	888 80	02.	01.5	01.8	01.9
Transportation Expenses	77,348 11	57,641 04	50,698 23	36,321 06	26,649 88	21,319 98	1 19.4	88.2	61.6	46.3
Miscellaneous Operations	2,777 58	3,209 14	1,752 65	1,277 66	1,024 93	1,931 48	04.1	03.1	02.4	04.2
General Expenses	8,764 18	7,770 94	5,267 27	4,398 35	3,496 91	3,372 59	12.4	10.7	08.1	07.3
Transportation for Investment—*Cr.*	173 60	108 84	173 60	108 84	.....	.....	00.4	00.3	.....	.....
Total Operating Expenses	146,367 82	103,445 00	87,900 46	58,459 65	58,467 36	44,985 35	2 07.	1 41.9	1 35.1	97.8
Hire of Equipment	5,203 34	205 65	5,526 33	Cr. 1,445 02	Cr. 322 99	1,650 67	13.	Cr. 03.5	Cr. 00.8	03.6
Total Expenses	151,571 16	103,650 65	93,426 79	57,014 63	58,144 37	46,636 02	2 20.	1 38.4	1 34.3	1 01.4
Balance	31,286 52	54,466 14	21,815 56	25,796 34	9,470 96	28,669 80	51.4	62.7	21.9	62.4
Income unallocated	2,792 47	2,736 13	.....	.....	.....	.....	.....	.....	.....	.....
Net Result	34,078 99	57,202 27	.....	.....	.....	.....	.....	.....	.....	.....

Per Mile of Road

Revenue.	Total.		Freight.		Passenger.	
	1917	1916	1917	1916	1917	1916
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Transportation	534 82	456 94	337 14	240 24	197 68	216 70
Incidental to Transportation	21 82	24 39	13 67	11 85	8 15	12 54
Total	556 64	481 33	350 81	252 09	205 83	229 24
Expenditures.						
Maintenance of Way and Structures	109 01	63 34	61 92	34 20	47 09	29 14
Maintenance of Equipment	61 57	38 37	27 90	14 32	33 67	24 05
Traffic Expenses	4 92	4 63	2 59	1 92	2 33	2 71
Transportation Expenses	235 46	175 47	154 33	110 57	81 13	64 90
Miscellaneous Operations	8 45	9 77	5 33	3 89	3 12	5 88
General Expenses	26 68	23 65	16 04	13 39	10 64	10 26
Transportation for Investment—*Cr.*	53	33	53	33	.....	.....
Total Operating Expenses	445 56	314 90	267 58	177 96	177 98	136 94
Hire of Equipment	15.84	63	16 82	Cr. 4 40	Cr. 98	5 03
Total Expenses	461 40	315 53	284 40	173 56	177 00	141 97
Balance	95 24	165 80	66 41	78 53	28 83	87 27
Income unallocated	8 50	8 33	.....	.....	.....	.....
Net Result	103 74	174 13	.....	.....	.....	.....

Comparative Statement—Earnings and Expenses—Freight and Passenger—per Train Mile and per Mile of Road
August, 1917-1916.

	Total.		Freight.		Passenger.		Per Train Mile.			
							Freight.		Passenger.	
	1917	1916	1917	1916	1917	1916	1917	1916	1917	1916
Train Miles	91,571	94,972	46,226	46,473	45,345	48,499	.....	.....	.....	.....
Car Miles—Loaded	955,417	863,715	702,873	562,026	252,544	301,689	15.2	12.1	5.6	6.2
" " Empty	215,134	243,531	215,134	243,531	.....	.....	4.7	5.2	.....	.....
Total Car Miles	1,170,551	1,107,246	918,007	805,557	252,544	301,689	19.9	17.3	5.6	6.2
REVENUE.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Transportation	188,635 36	165,604 43	118,163 33	94,860 30	70,472 03	70,744 13	2 55.6	2 04.1	1 55.4	1 45.9
Incidental to Transportation	8,171 19	10,084 19	5,130 24	4,500 69	3,040 95	5,583 50	11.1	09.7	06.7	11.5
Total	196,806 55	175,688 62	123,293 57	99,360 99	73,512 98	76,327 63	2 66.7	2 13.8	1 62.1	1 57.4
EXPENDITURES.										
Maintenance of Way and Structures	42,549 22	33,964 50	23,061 68	17,899 29	19,487 54	16,065 21	49.9	38.5	43.	33.1
" " Equipment	20,822 11	17,643 29	9,348 66	8,134 57	11,473 45	9,508 72	20.2	17.5	25.3	19.6
Traffic Expenses	1,761 48	3,758 86	921 66	751 76	839 82	3,007 10	02.	01.6	01.8	06.2
Transportation Expenses	75,081 07	62,658 02	48,411 59	40,511 59	26,669 48	22,146 43	1 04.7	87.2	58.8	45.7
Miscellaneous Operations	2,757 40	3,939 13	1,726 13	1,753 44	1,031 27	2,185 69	03.7	03.8	02.3	04.5
General Expenses	7,756 38	7,478 93	4,529 73	4,233 08	3,226 65	3,245 85	09.8	09.1	07.1	06.7
Transportation for Investment—*Cr.*	450 46	220 58	450 46	220 58	.....	.....	00.9	00.5	.....	.....
Total Operating Expenses	150,277 20	129,222 15	87,548 99	73,063 15	62,728 21	56,159 00	1 89.4	1 57.2	1 38.3	1 15.8
Hire of Equipment	9,070 63	6,553 37	8,929 82	9,510 31	140 81	Cr. 2,956 94	19.3	20.5	00.3	Cr. 06.1
Total Expenses	159,347 83	135,775 52	96,478 81	82,573 46	62,869 02	53,202 06	2 08.7	1 77 7	1 38.6	1 09.7
Balance	37,458 72	39,913 10	26,814 76	16,787 53	10,643 96	23,125 57	58.	36.1	23.5	47.7
Income unallocated	2,738 16	16,305 66	.....	.....	.....	.....	.....	.....	.....	.....
Net Result	40,196 88	56,218 76	.....	.....	.....	.....	.....	.....	.....	.....

Per Mile of Road

Revenue.	Total.		Freight		Passenger.	
	1917	1916	1917	1916	1917	1916
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Transportation	574 23	504 12	359 70	288 77	214 53	215 35
Incidental to Transportation	24 88	30 70	15 62	13 70	9 26	17 00
Total	599 11	534 82	375 32	302 47	223 79	232 35
Expenditures:						
Maintenance of Way and Structures	129 53	103 39	70 21	54 49	59 32	48 90
Maintenance of Equipment	63 39	53 71	28 46	24 76	34 93	28 95
Traffic Expenses	5 36	11 44	2 80	2 29	2 56	9 15
Transportation Expenses	228 56	190 74	147 37	123 32	81 19	67 42
Miscellaneous Operations	8 39	11 99	5 25	5 34	3 14	6 65
General Expenses	23 61	22 77	13 79	12 89	9 82	9 88
Transportation for Investment—*Cr.*	1 37	67	1 37	67	.....	.....
Total Operating Expenses	457 47	393 37	266 51	222 42	190 96	170 95
Hire of Equipment	27 61	19 95	27 18	28 95	43	Cr. 9 00
Total Expenses	485 08	413 32	293 69	251 37	191 39	161 95
Balance	114 03	121 50	81 63	51 10	32 40	70 40
Income unallocated	8 34	49 64	.....	.....	.....	.....
Net Result	122 37	171 14	.....	.....	.....	.....

Comparative Statement—Earnings and Expenses—Freight and Passenger—per Train Mile and per Mile of Road.

September, 1917-1916.

	Total		Freight.		Passenger.		Per Train Mile.			
							Freight.		Passenger.	
	1917	1916	1917	1916	1917	1916	1917	1916	1917	1916
Train Miles	86,078	94,202	44,429	48,540	41,649	45,662	.....	.....	.....	.....
Car Miles—Loaded	894,234	880,962	667,743	617,541	226,491	263,421	15.	12.7	5.4	5.8
" " Empty	273,525	255,317	273,525	255,317	.....	.....	6.2	5.3	.....	.....
Total Car Miles	1,167,759	1,136,279	941,268	872,858	226,491	263,421	21.2	18.	5.4	5.8
REVENUE.										
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Transportation	208,609 30	187,192 85	125,675 90	97,650 26	82,933 40	89,542 59	2 82.9	2 01.2	1 99.1	1 96.1
Incidental to Transportation	10,258 79	10,899 36	5,904 13	5,080 66	4,354 66	5,818 70	13.3	10.4	10.5	12.7
Total	218,868 09	198,092 21	131,580 03	102,730 92	87,288 06	95,361 29	2 96.2	2 11.6	2 09.6	2 08.8
EXPENDITURES.										
Maintenance of Way and Structures	34,725 16	15,648 55	21,251 80	9,123 10	13,473 36	6,525 45	47.8	18.8	32.3	14.3
" " Equipment	22,139 06	12,378 52	10,661 70	3,096 65	11,477 36	9,281 87	24.	66.4	27.6	20.3
Traffic Expenses	1,565 42	1,047 35	870 63	605 27	694 79	442 08	02.	01.2	01.7	01.
Transportation Expenses	76,832 17	64,994 19	48,710 82	44,404 86	28,121 35	20,589 33	1 09.6	91.5	67.5	45.1
Miscellaneous Operations	4,414 41	4,485 67	1,523 75	1,264 75	2,890 66	3,220 92	03.4	02.6	06.9	07.
General Expenses	8,579 63	11,358 98	5,096 30	6,747 23	3,483 33	4,611 75	11.5	13.9	08.4	10.1
Transportation for Investment—*Cr.*	227 12	275 80	227 12	275 80	.....	.....	00.5	00.6	.....	.....
Total Operating Expenses	148,028 73	109,637 46	87,887 88	64,966 06	60,140 85	44,671 40	1 97.8	1 33.8	1 44.4	97.8
Hire of Equipment	3,114 63	6,254 11	3,854 04	5,718 48	Cr. 739 41	535 63	08.7	11.8	Cr. 01.8	01.2
Total Expenses	151,143 36	115,891 57	91,741 92	70,684 54	59,401 44	45,207 03	2 06.5	1 45.6	1 42.6	99.
Balance	67,724 73	82,200 64	39,838 11	32,046 38	27,886 62	50,154 26	89.7	66.	67.	1 09.8
Income unallocated	44,580 62	2,901 48	.....	.....	.....	.....	.....	.....	.....	.....
Net Result	112,305 35	85,102 12	.....	.....	.....	.....	.....	.....	.....	.....

Per Mile of Road.

Revenue.	Total.		Freight.		Passenger.	
	1917	1916	1917	1916	1917	1916
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Transportation	635 03	569 84	382 57	297 26	252 46	272 58
Incidental to Transportation	31 23	33 18	17 97	15 47	13 26	17 71
Total	666 26	603 02	400 54	312 73	265 72	290 29
Expenditures.						
Maintenance of Way and Structures	105 71	47 64	64 69	27 77	41 02	19 87
Maintenance of Equipment	67 39	37 68	32 45	9 43	34 94	28 25
Traffic Expenses	4 76	3 19	2 65	1 84	2 11	1 35
Transportation Expenses	233 89	197 85	148 28	135 17	85 61	62 68
Miscellaneous Operations	13 44	13 65	4 64	3 85	8 80	9 80
General Expenses	26 12	34 58	15 52	20 54	10 60	14 04
Transportation for Investment—*Cr.*	69	84	69	84	.....	.....
Total Operating Expenses	450 62	333 75	267 54	197 76	183 08	135 99
Hire of Equipment	9 48	19 04	11 73	17 41	Cr. 2 25	1 63
Total Expenses	460 10	352 79	279 27	215 17	180 83	137 62
Balance	206 16	250 23	121 27	97 56	84 89	152 67
Income unallocated	135 71	8 83	.....	.....	.....	.....
Net Result	341 87	259 06	.....	.....	.....	.....

Comparative Statement—Earnings and Expenses—Freight and Passenger—per Train Mile and per Mile of Road.

October, 1917-1916

	Total.		Freight.		Passenger.		Per Train Mile. Freight.		Per Train Mile. Passenger.	
	1917	1916	1917	1916	1917	1916	1917	1916	1917	1916
Train Miles	90,045	97,553	51,971	54,120	38,074	43,433	.....	.....	.....	.....
Car Miles—Loaded	969,158	952,401	747,374	721,045	221,784	231,356	14.4	13.3	5.8	5.3
" " Empty	454,980	213,241	454,980	213,241	.....	.....	8.8	4.	.....	.....
Total Car Miles	1,424,138	1,165,642	1,202,354	934,286	221,784	231,356	23.2	17.3	5.8	5.3
REVENUE.										
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Transportation	216,800 19	189,927 48	146,905 68	115,830 56	69,894 51	74,096 92	2 82.7	2 14.	1 83.6	1 70.6
Incidental to Transportation	11,171 55	9,072 99	7,381 02	4,983 35	3,790 53	4,089 64	14.2	09.2	09.9	09.4
Total	227,971 74	199,000 47	154,286 70	120,813 91	73,685 04	78,186 56	2 96.9	2 23.2	1 93.5	1 80.
EXPENDITURES.										
Maintenance of Way and Structures	46,968 88	15,161 24	30,905 52	9,142 23	16,063 36	6,019 01	59.5	16.9	42.2	13.8
" " Equipment	27,801 51	13,654 15	16,264 83	4,766 76	11,536 68	8,887 39	31.3	08.8	30.3	20.5
Traffic Expenses	1,545 00	1,192 19	754 56	718 70	790 44	473 49	01.4	01.3	02.1	01.1
Transportation Expenses	85,326 52	60,639 62	60,725 18	40,410 14	24,601 34	20,229 48	1 16.8	74.7	64.6	46.6
Miscellaneous Operations	3,771 28	4,814 00	1,913 51	1,857 56	1,857 77	2,956 44	03.7	03.4	04.9	06.8
General Expenses	8,319 26	10,232 67	5,557 27	6,098 67	2,761 99	4,134 00	10.7	11.3	07.2	09.5
Transportation for Investment—*Cr.*	121 35	287 35	121 35	287 35	.....	.....	00.2	00.5	.....	.....
Total Operating Expenses	173,611 10	105,406 52	115,999 52	62,706 71	57,611 58	42,699 81	2 23.2	1 15.9	1 51.3	98 3
Hire of Equipment	7,730 54	7,152 58	7,943 59	7,404 90	Cr. 213 05	Cr. 252 32	15.3	13.6	Cr. 00.6	Cr. 00.6
Total Expenses	181,341 64	112,559 10	123,943 11	70,111 61	57,398 53	42,447 49	2 38.5	1 29.5	1 50.7	97.7
Balance	46,630 10	86,441 37	30,343 59	50,702 30	16,286 51	35,739 07	58.4	93.7	42.8	82.3
Income unallocated	22,110 69	36,227 87	.....	.....	.....	.....	.....	.....	.....	.....
Net Result	68,740 79	122,669 24	.....	.....	.....	.....	.....	.....	.....	.....

Per Mile of Road.

Revenue.	Total.		Freight.		Passenger.	
	1917	1916	1917	1916	1917	1916
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Transportation	659 97	578 16	447 20	352 60	212 77	225 56
Incidental to transportation	34 01	27 62	22 47	15 17	11 54	12 45
Total	693 98	605 78	469 67	367 77	224 31	238 01
Expenditures.						
Maintenance of Way and Structures	142 98	46 15	94 08	27 83	48 90	18 32
" " Equipment	84 63	41 57	49 51	14 51	35 12	27 06
Traffic Expenses	4 70	3 63	2 30	2 19	2 40	1 44
Transportation Expenses	259 75	184 59	184 86	123 01	74 89	61 58
Miscellaneous Operations	11 48	14 65	5 82	5 65	5 66	9 00
General Expenses	25 33	31 15	16 92	18 57	8 41	12 58
Transportation for Investment—*Cr.*	37	87	37	87	.....	.....
Total Operating Expenses	528 50	320 87	353 12	190 89	175 38	129 98
Hire of Equipment	23 53	21 77	24 18	22 54	Cr. 65	Cr. 77
Total Expenses	552 03	342 64	377 30	213 43	174 73	129 21
Balance	141 95	263 14	92 37	154 34	49 58	108 80
Income unallocated	67 31	110 28	.....	.....	.....	.....
Net result	209 26	373 42	.....	.....	.....	.....

Comparative Statement—Earnings and Expenses—Freight and Passenger—per Train Mile and per Mile of Road November 1st, 1916, to October 31st, 1917.

	Total		Freight.		Passenger.		Per Train Mile.			
							Freight.		Passenger.	
	1917	1916	1917	1916	1917	1916	1917	1916	1917	1916
Train Miles	1,064,184	1,145,787	570,283	609,524	493,901	536,263				
Car Miles—Loaded	11,240,054	11,626,247	8,570,517	8,830,820	2,669,537	2,795,427	15.	14.5	5.4	5.2
" " Empty	2,803,998	3,018,495	2,803,998	3,018,495			4.9	4.9		
Total Car Miles	14,044,052	14,644,742	11,374,515	11,849,315	2,669,537	2,795,427	19.9	19.4	5.4	5.2
REVENUE.										
Transportation	$ c. 2,220,210 75	$ c. 2,044,808 99	$ c. 1,469,732 53	$ c. 1,330,925 07	$ c. 750,478 22	$ c. 713,883 92	$ c. 2 57.7	$ c. 2 18.4	$ c. 1 51.9	$ c. 1 33.1
Incidental to transportation	111,695 04	93,312 96	68,886 18	52,384 51	42,808 86	40,928 45	12.1	08.6	08.7	07.6
Total	2,331,905 79	2,138,121 95	1,538,618 71	1,383,309 58	793,287 08	754,812 37	2 69.8	2 27.	1 60.6	1 40.7
EXPENDITURES.										
Maintenance of Way and Structures	419,266 84	349,024 48	251,729 18	205,235 20	167,537 66	143,789 28	44.1	33.7	33.9	26.8
" " Equipment	305,286 86	248,702 04	149,160 51	119,080 01	156,126 35	129,622 03	26.2	19.5	31.6	24.2
Traffic Expenses	17,676 10	22,465 69	9,343 17	12,204 27	8,332 93	10,261 42	01.6	02.	01.7	01.9
Transportation Expenses	985,452 19	842,058 75	658,704 95	576,871 52	326,747 24	265,187 23	1' 15.6	94.6	66.2	49.4
Miscellaneous Operations	47,824 69	42,562 89	20,118 98	18,059 69	27,705 71	24,503 20	03.5	03.	05.6	04.6
General Expenses	107,255 05	91,317 74	65,762 97	55,490 55	41,492 08	35,827 19	11.5	09.1	08.4	06.7
Transportation for Investment—*Cr.*	1,465 44	1,954 13	1,465 44	1,954 13			00.3	00.3		
Total Operating Expenses	1,881,296 29	1,594,177 46	1,153,354 32	984,987 11	727,941 97	609,190 35	2 02.2	1 61.6	1 47.4	1 13.6
Hire of Equipment	90,336 42	105,241 09	89,475 53	92,088 69	860 89	13,152 40	15.7	15.1	00.2	02.4
Total Expenses	1,971,632 71	1,699,418 55	1,242,829 85	1,077,075 80	728,802.86	622,342 75	2 17.9	1 76.7	1 47.6	1 16.
Balance	360,273 08	438,703 40	295,788 86	306,233 78	64,484 22	132,469 62	51.9	50.3	13.	24.7
Income unallocated	156,427 48	90,002 06								
Net Result	516,700 56	528,705 46								

Per Mile of Road.

REVENUE.	Total.		Freight.		Passenger.	
	1917	1916	1917	1916	1917	1916
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Transportation	6,758 63	6,224 68	4,474 07	4,051 52	2,284 56	2,173 16
Incidental to Transportation	340 02	284 06	209 70	159 47	130 32	124 59
Total	7,098 65	6,508 74	4,683 77	4,210 99	2,414 88	2,297 75
EXPENDITURES.						
Maintenance Way and Structures	1,276 31	1,062 48	766 30	624 77	510 01	437 71
Maintenance of Equipment	929 34	757 08	454 07	362 49	475 27	394 59
Traffic Expenses	53 81	68 39	28 44	37 15	25 37	31 24
Transportation Expenses	2,999 85	2,563 35	2,005 19	1,756 08	994 66	807 27
Miscellaneous Operations	145 58	129 57	61 24	54 98	84 34	74 59
General Expenses	326 50	277 98	200 19	168 92	126 31	109 06
Transportation for Investment—Cr	4 46	5 95	4 46	5 95	.....	.....
Total Operating Expenses	5,726 93	4,852 90	3,510 97	2,998 44	2,215 96	1,854 46
Hire of Equipment	275 00	320 37	272 38	280 33	2 62	40 04
Total Expenses	6,001 93	5,173 27	3,783 35	3,278 77	2,218 58	1,894 50
Balance	1,096 72	1,335 47	900 42	932 22	196 30	403 25
Income Unallocated	476 19	273 98	.....	.....	.....	.....
Net Result	1,572 91	1,609 45	.....	.....	.....	.....

Freight Traffic Movement—Company's Material Excluded—Year Ending October 31st, 1917.

Commodity.	Freight originating on T. & N. O.	Freight originating at other stations in Canada.	Freight originating in U.S.	Total Freight.
	Whole Tons.	Whole Tons.	Whole Tons.	Whole Tons.
Products of Agriculture—				
Grain	1,749	36,151	.....	37,900
Flour	113	13,733	.....	13,846
Other Mill Products	1,082	4,330	.....	5,412
Hay	8,550	3,359	.....	11,909
Tobacco	.....	136	.....	136
Cotton	.....	.....	.....	.....
Fruit and Vegetables	2,335	8,251	30	10,616
Other Products of Agriculture	32	915	.....	947
Total	13,861	66,875	30	80,766
Products of Animals—				
Live Stock	1,485	2,490	.....	3,975
Dressed Meats	.....	2,044	20	2,064
Other Packing House Products	.....	339	.....	339
Poultry, Game and Fish	.....	3,090	.....	3,090
Wool	.....	.....	.....	.....
Hides and Leather	.....	1,136	.....	1,136
Other Products of Animals	.....	1,207	.....	1,207
Total	1,485	10,306	20	11,811
Products of Mines—				
Anthracite Coal	858	7,354	8,604	16,816
Bituminous Coal	5,915	60,592	65,706	132,213
Coke	80	504	454	1,038
Ores	23,995	423	.....	24,418
Stone, Sand and other like articles	23,849	3,590	42	27,481
Other Products of Mines	685	2,758	385	3,828
Total	55,382	75,221	75,191	205,794
Products of Forests—				
Lumber	97,993	15,317	22	113,332
Other Products of Forests	191,562	90,630	.....	282,192
Total	289,555	105,947	22	395,524
Manufactures—				
Petroleum and other Oils	82	5,993	64	6,139
Sugar	.....	2,142	.....	2,142
Naval Stores	.....	.....	.....	.....
Iron, Pig and Bloom	.....	630	.....	630
Iron and Steel Rails	125	1,059	.....	1,184
Other Castings and Machines	1,912	18,975	591	21,478
Bar and Sheet Metal	158	2,570	79	2,807
Cement, Brick and Lime	2,375	19,142	20	21,537
Agricultural Implements	12	6,145	.....	6,157
Wagons, Carriages, Tools, etc	118	11,328	.....	11,446
Wines, Liquors and Beers	64	2,584	.....	2,648
Household Goods and Furniture	308	11,489	.....	11,797
Other Manufactures	66,436	29,689	1,290	97,415
Total	71,590	111,746	2,044	185,380
Merchandise	26,354	39,956	432	66,742
Miscellaneous—				
Other Commodities not mentioned above	7,123	7,422	152	14,697
Total Tonnage	465,350	417,473	77,891	960,714

Statistics—Temiskaming and Northern Ontario Railway.

Comparative Passenger and Freight Statement.

——	Passengers.	Revenue.
		$ c.
Number of passengers carried during year 1905.....	86,648	108,681 76
" " " " 1906.....	359,861	254,759 33
" " " " 1907.....	518,678	388,343 03
" " " " 1908.....	479,005	366,504 53
" " " " 1909.....	580,748	483,110 89
" " " " 1910.....	670,913	606,967 91
" " " " 1911.....	479,102	653,063 01
" " " " 1912.....	497,452	599,681 73
" " " " 1913.....	508,055	576,049 37
" " " " 1914.....	535,869	544,820 08
" " " " 1915.....	480,995	482,349 80
" " " " 1916.....	485,759	624,808 12
" " " " 1917.....	499,759	655,127 58
Total	6,182,844	6,344,267 14

Number of passengers carried one mile, period 1905 to 1917, inclusive..... 265,068,670

——	Tons.	Revenue.
		$ c.
Number of tons of freight carried during year 1905 ...	99,192	121,530 46
" " " " " 1906 ...	273,749	230,552 63
" " " " " 1907 ...	393,589	390,894 29
" " " " " 1908 ...	484,444	471,203 41
" " " " " 1909 ...	498,645	756,141 66
" " " " " 1910 ...	624,820	852,886 46
" " " " " 1911 ...	564,120	974,678 33
" " " " " 1912 ...	562,734	929,464 66
" " " " " 1913 ...	674,942	906,476 16
" " " " " 1914 ...	742,366	952,090 35
" " " " " 1915 ...	676,938	925,735 37
" " " " " 1916 ...	922,618	1,320,569 33
" " " " " 1917 ...	960,714	1,459,459 93
Total.....	7,478,871	10,291,683 04

Number of tons of freight carried one mile, period 1905 to 1917, inclusive..... 913,640,869

Equipment owned by Temiskaming and Northern Ontario Railway. October 31st, 1917.

	Total Authorized Equipment.	Available for Service.	Destroyed or Transferred to other classes	Capacity. Tractive Power.	Total Valuation.
					$ c.
STEAM LOCOMOTIVES.					
Class A 3	4	4	.....	112,640	.....
Class B 4	4	4	.....	170,000	.....
Class C 2	2	2	.....	26,488	.....
Class C 3	30	29	1	680,746	.....
Class F 3	4	4	.....	121,600	.....
Class G 4	6	6	.....	182,000	.....
Total	50	49	1	.....	953,398 21
PASSENGER EQUIPMENT.					
First Class Coaches (wooden)	14	14	.....	.....	.....
" " " (steel)	6	6	.....	.....	.....
Second " " (wooden)	21	14	7	.....	.....
" " " (steel)	4	4	.....	.....	.....
Combination " (wooden)	3	3	.....	.....	.....
" " (steel)	3	.....	3	.....	.....
Parlor-Cafe	3	3	.....	.....	.....
Baggage and Express (wooden)	7	5	2	.....	.....
" " (steel)	4	4	.....	.....	.....
Mail and Express (wooden)	6	5	1	.....	.....
" " (steel)	3	3	.....	.....	.....
Private	2	2	.....	.....	.....
Business	2	2	.....	.....	.....
Total	78	65	13	.....	806,744 25
FREIGHT EQUIPMENT.					
Box	150	144	6	.....	.....
Stock	10	9	1	.....	.....
Vans	30	26	4	.....	.....
Flats	461	402	59	.....	.....
Total	651	581	70	.....	622,314 68
MAINTENANCE OF WAY AND STRUCTURES EQUIPMENT.					
Pile Driver	1	1	.....	.....	.....
Snow Plows	4	3	1	.....	.....
Flangers	3	3	.....	.....	.....
Steam Shovels	3	3	.....	.....	.....
Wrecking Cranes	2	2	.....	.....	.....
Auxiliaries (Complete)	2	2	.....	.....	.....
Road Cabin Cars	2	2	.....	.....	.....
Ledgerwood Unloaders	3	2	1	.....	.....
Side Ballast Plows	6	6	.....	.....	.....
Centre Ballast Plows	3	3	.....	.....	.....
Jordan Spreaders	2	2	.....	.....	.....
Pile Driver Tank	1	1	.....	.....	.....
Mahoney Ditching Machine	1	1	.....	.....	.....
Centre Ballast Spreader	1	1	.....	.....	.....
American Railroad Ditcher	1	1	.....	.....	.....
Cinder Cars, Steel	12	12	.....	.....	.....
Hart Convertibles	35	35	.....	.....	.....
Exhibition Cars	1	1	.....	.....	.....
Fish Car (owned by Dept. of Public Works)	1	1	.....	.....	.....
Tank Cars	6	6	.....	.....	.....
Boarding Cars	27	27	.....	.....	.....
M. of W. Combination Boarding and Material Cars	10	10	.....	.....	.....
M. of W. Material Cars	8	8	.....	.....	.....
Auxiliary Track Material Cars	2	2	.....	.....	.....
Hand Cars	120	100	20	.....	.....
Push Cars	86	78	8	.....	.....
Velocipedes	26	11	15	.....	.....
Motors	3	3	.....	.....	.....
Total	372	327	45	.....	181,454 65
Grand Total	.....	.....	.....	.....	2,563,911 79

TONNAGE.

Statement of Tons One Mile—Year Ending October 31st, 1917.

Month.	South Bound (Pounds).	North Bound (Pounds).	Total (Pounds).	Whole Tons.	Tons (One Mile).
November 1916....	66,571,620	72,212,181	138,783,801	69,392	11,259,595
December "	81,880,364	73,288,702	155,169,066	77,584	11,113,448
January 1917....	89,923,283	70,776,905	160,700,188	80,350	12,769,172
February "	83,534,889	54,969,089	138,503,978	69,252	10,446,749
March "	97,588,462	81,016,962	178,605,424	89,303	14,431,327
April "	86,025,053	102,221,138	188,246,191	94,123	16,694,560
May "	120,539,835	68,335,661	188,875,496	94,438	17,386,221
June "	73,477,740	87,269,567	160,747,307	80,374	13,728,016
July "	97,018,440	59,586,682	156,605,122	78,303	12,347,287
August "	87,883,825	71,554,106	159,437,931	79,719	14,175,189
September "	72,588,600	70,463,123	143,051,723	71,526	13,048,324
October "	75,000,067	77,700,742	152,700,809	76,350	14,076,840
Total.....	1,032,032,178	889,394,858	1,921,427,036	960,714	161,476,728

FOREST PRODUCTS.

Statement of Tonnage, Tons one mile, Total Revenue, and Revenue per ton per mile, for 12 months November 1st, 1916, to October 31st, 1917, under various headings.

Commodity.	Gross Tonnage. (Pounds).	Whole Tons.	Tons One Mile.	Revenue.	Revenue per ton per mile.
				$ c.	c.
Lumber	142,377,570	71,189	7,566,769	76,921 61	1.0166
Pulpwood.....	511,197,061	255,599	39,071,094	212,750 10	.5445
Pulp	26,423,760	13,212	3,018,752	13,719 30	.4545
Slabwood.....	25,396,419	12,698	449,292	7,362 60	1.6387
Poles	8,050,006	4,025	359,349	3,270 30	.9101
Posts.....	1,954,100	977	132,670	915 33	.6899
Piling	9,746,325	4,873	742,965	4,361 46	.587
Timber	2,284,640	1,142	88,062	1,218 14	1.3833
Logs	55,388,623	27,694	1,158,542	10,211 08	.8814
Ties.....	5,081,000	2,541	323,346	2,686 44	.8308
Shingles	434,060	217	29,758	236 96	.7963
Laths	1,348,000	674	63,539	657 78	1.0352
Sawdust, etc.....	1,365,900	683	51,491	523 18	1.0161
Total.....	791,047,464	395,524	53,055,629	334,834 28	.6311

PASSENGER TRAFFIC.

Statement of Passengers, Revenue, Passengers one Mile and Passenger Revenue per mile, from November 1st, 1916, to October 31st, 1917.

Form of Ticket.	Passengers.	Revenue.	Passengers One Mile.	Passenger, Revenue One Mile.
		$ c.		c.
Commercial	22,910	45,265 88	2,072,001	2.18
Week Ends	7,196	6,237 30	410,959	1.52
Excursion	22,743	43,636 18	2,813,386	1.55
Market	7,162	1,837 30	115,565	1.56
Militia	8,714	24,685 39	1,915,796	1.29
Scholars.....	2,893	241 40	37,968	.64
Ordinary	428,141	533,224 13	21,250,649	2.51
Total	499,759	655,127 58	28,616,324	2.29

STATEMENT OF MATERIALS AND SUPPLIES ON HAND OCTOBER 31ST, 1917.

Shop Stock—North Bay.

Class.	Material.	Amount.
1	Air brake material	$2,155 87
2	Wheels, tires and axles	31,131 74
3	Bolts, nuts, etc.	11,654 72
4	Building material	1,496 18
5	Coach fittings	9,404 65
6	Iron castings	13,402 97
7	Couplers and parts	4,411 64
8	Forgings	2,223 02
9	Telegraph and telephone material	2,072 95
	Telegraph and telephone line stock	2,100 95
10	Electrical material	10,429 17
11	Glass	1,579 46
12	Hardware	1,994 07
13	Brass castings	16,799 78
14	Lamps and parts	1,115 90
15	Locomotive parts finished	6,588 63
16	Lumber (Carpenter Shop)	11,100 36
17	Lumber (Bridge and Building Department)	8,936 12
18	Metals	1,120 94
19	Miscellaneous	4,951 56
21	Water supply service parts	1,428 15
22	Paints and brushes	2,893 27
23	Pipes, fittings, valves, etc.	8,326 76
26	Hose and rubber	3,564 15
28	Commissary	149 81
	Commissary, Line stock	265 25
29	Springs	6,172 42
30	Iron and steel (bar)	13,252 17
31	Steam shovel, ditcher and ledgerwood parts	759 01
32	Tools, etc.	6,741 47
33	Track material	41,398 30
	Track material, Line stock	6,788 57
	Reclaimed material	3,972 57
		$240,382 58

Shop Stock—Englehart.

Class.	Material.	Amount.
1	Air brake material	$70 96
2	Wheels, tires and axles	1,481 28
3	Bolts, nuts, etc.	612 94
4	Building material	.....
5	Coach fittings	41 36
6	Iron castings	686 06
7	Couplers and parts	389 83
8	Forgings	36 98
9	Telegraph and telephone material	.....
10	Electrical material	53 15
11	Glass	53 79
12	Hardware	57 19
13	Brass castings	399 60
14	Lamps and parts	62 53
15	Locomotive parts finished	38 01
16	Lumber (Carpenter Shop)	.....
17	Lumber (Bridge and Building Department)	.....
18	Metals	16 66
19	Miscellaneous	182 58
21	Water supply service parts	.....
22	Paints and brushes	3 56
23	Pipes, fittings, valves, etc.	457 08
26	Hose and rubber	122 03
28	Commissary	.....

Class.	Material.	Amount.
29	Springs	$210 03
30	Iron and steel (bar)	78 28
31	Steam shovel, ditcher and ledgerwood parts	.....
32	Tools, etc.	124 03
33	Track material	.....
		$5,177 93

Shop Stock—Timmins.

1	Air brake material	$13 16
2	Wheels, tires and axles	84 97
3	Bolts, nuts, etc.	102 79
4	Building material	.....
5	Coach fittings	1 87
6	Iron castings	158 77
7	Couplers and parts	106 80
8	Forgings	10 16
9	Telegraph and telephone material	.....
10	Electrical material	48 46
11	Glass	.....
12	Hardware	2 30
13	Brass castings	.....
14	Lamps and parts	26 42
15	Locomotive parts finished	2 70
16	Lumber (Carpenter Shop)	.....
17	Lumber (Bridge and Building Department)	.....
18	Metals	.....
19	Miscellaneous	25 24
21	Water supply service parts	.....
22	Paints and brushes	2 50
23	Pipes, fittings, valves, etc.	51 30
26	Hose and rubber	44 88
28	Commissary	.....
29	Springs	5 66
30	Iron and steel (bar)	.....
31	Steam shovel, ditcher and ledgerwood parts	.....
32	Tools, etc.	22 01
33	Track material	.....
		$709 99

Shop Stock—Cochrane.

1	Air brake material	$7 00
2	Wheels, tires and axles	579 52
3	Bolts, nuts, etc.	374 00
4	Building material	.....
5	Coach fittings	4 80
6	Iron castings	380 59
7	Couplers and parts	363 27
8	Forgings	149 58
9	Telegraph and telephone material	.....
10	Electrical material	94
11	Glass	15 65
12	Hardware	7 21
13	Brass castings	10 35
14	Lamps and parts	4 32
15	Locomotive parts finished	1 12
16	Lumber (Carpenter Shop)	.....
17	Lumber (Bridge and Building Department)	.....
18	Metals	.....
19	Miscellaneous	38 68
21	Water supply service parts	.....
22	Paints and brushes	.....
23	Pipes, fittings, valves, etc.	100 85
26	Hose and rubber	22 54

Class.	Material.	Amount.
28	Commissary	.....
29	Springs	187 91
30	Iron and steel (bar)	.....
31	Steam shovel, ditcher and ledgerwood parts	.....
32	Tools, etc.	72 42
33	Track material	.....
		$2,320 75

RECAPITULATION OF SHOP STOCK.

Location.	Amount.
North Bay	$240,382 58
Englehart	5,177 93
Timmins	709 99
Cochrane	2,320 75
	$248,591 25
Plus accounts in transit:—	
Claim—Grand Trunk Railway $85 43	
Claim—Canadian Pacific Railway 2 78	
Duty—included November accounts 12 38	
	100 59
	$248,691 84
Less unvouchered material:—	
Canadian Fairbanks Morse Co., Ltd. $77 20	
Jas. Robertson Co., Ltd. 24 25	
Cochrane Hardware, Ltd. 132 54	
	233 99
	$248,457 85

Ice Stock.

North Bay	$1,988 10
Englehart	54 90
Cochrane	25 20
	$2,068 20

Stationery Stock.

North Bay	$5,989 28
Less unvouchered material:—	
The Planet $74 50	
Crain Printers 8 50	
Jackson Press 18 75	
	101 75
	$5,887 53

Oil and Waste Stock.

North Bay	$4,639 43
Elk Lake	40 84
Englehart	446 36
Iroquois Falls	12 10
Timmins	233 85
Cochrane	473 36
	$5,845 94

Tie Stock.

North Bay and on line	$12,447 48

Rail Stock.

North Bay and on line	$52,849 93

Anthracite Coal.

	Weight—lbs.
North Bay—Stores	384,961
North Bay—Freight Office	27,350
In transit	154,000
Widdifield	28,500
Tomiko	27,000
Redwater	22,500
Temagami	50,900
Latchford	65,000
Cobalt	79,500
North Cobalt	32,000
Haileybury	76,650
Liskeard	80,100
Uno Park	23,000
Thornloe	31,000
Earlton	56,500
Elk Lake	90,000
Heaslip	26,000
Englehart	231,550
Charlton	43,000
Dane	34,800
Swastika	55,000
Matheson	88,000
Porquis Junction	61,780
Connaught	.....
South Porcupine	85,120
Schumacher	79,500
Timmins	78,700
Iroquois Falls	67,800
Cochrane	30,000
	2,110,211 or 1.055 1-10 tons.
1.055 1-10 tons at $7.18 per ton	$7,575 62

Bituminous Coal.

	Weight—lbs.
In transit	1,002,800
North Bay Boiler Room	24,000
North Bay Machine Shop	30,000
North Bay Dump	70,328,000
North Bay Cars in yard	1,300,000
North Bay Chutes	600,000
Widdifield	11,000
Tomiko	125,000
Redwater	110,000
Temagami	66,930
Latchford	13,000
Liskeard	87,820
Elk Lake	8,900
Englehart	723,600
Matheson	40,000
Porquis Junction	130,000
Connaught	4,000
Timmins	141,960
Cochrane	419,108
	75,166,118 or 37,583 net tons.
37,583 tons at $6.21 per ton	$233,390 43
Less refund of freight charges on November business taken to credit in October	57 04
	233,333 39

SUMMARY.

Shop stock	$248,457 85
Ice	2,068 20
Stationery	5,887 53
Oil and waste	5,845 94
Ties	12,447 48
Rails	52,849 93
Anthracite coal	7,575 62
Bituminous coal	233,333 39
Total	$568,465 94

TRAFFIC AND MILEAGE STATISTICS.

Passenger Traffic.

1. Total passengers carried earning revenue	499,759
2. Number of passengers carried one mile	28,616,324
3. Number of passengers carried one mile per mile of road	87,112
4. Average distance carried—miles	57.26
5. Total passenger revenue	$655,127 58
6. Average amount received from each passenger	1 31
7. Average receipts per passenger per mile (cents)	2.29
8. Total passenger train service revenue	750,478 22
9. Passenger service train revenue per mile of road	2,284 56
10. Passenger service train revenue per train mile	1 52

Freight Traffic.

11. Number of tons carried earning revenue	960,714
12. Number of tons carried earning revenue one mile	161,476,728
13. Number of tons carried earning revenue one mile per mile of road	491,558
14. Average distance haul of one ton—miles	168.08
15. Total freight revenue	$1,459,459 93
16. Average amount received for each ton	1 52
17. Average amount received per ton per mile (cents)	.90
18. Freight revenue per mile of road	4,442 80
19. Freight revenue per train mile	2 56

Total Traffic.

20. Operating revenue	$2,331,905 79
21. Operating revenue per mile of road	7,098 65
22. Operating revenue per train mile	2 32
23. Operating expenses	1,881,296 29
24. Operating expenses per mile of road	5,726 93
25. Operating expenses per train mile	1 87
26. Net operating revenue	450,609 50
27. Net operating revenue per mile of road	1,371 72

Car Mileage.

28. Average number of passengers carried one mile per car mile	10.7
29. Average number of passengers carried one mile per train mile	58.
30. Average number of passenger cars per train mile	5.41
31. Mileage of passenger cars	2,670,537
32. Mileage of loaded freight cars—north and east	5,035,666
33. Mileage of loaded freight cars—south and west	3,534,851
34. Mileage of empty freight cars—north and east	938,100
35. Mileage of empty freight cars—south and west	1,307,430
36. Average number of freight cars per train mile	19.95
37. Average number of loaded freight cars per train mile	15.03
38. Average number of empty freight cars per train mile	3 94
39. Average number of tons freight per train mile	283.15
40. Average number of tons freight per loaded car mile	18.84
41. Average mileage operated during the year	328.5

Train Mileage.

42. Mileage of revenue passenger trains	435,769
43. Mileage of revenue mixed trains	58,132
44. Mileage of revenue freight trains	512,151
45. Total revenue train mileage	1,006 052

TOWNSITES REPORT.

STATEMENT OF RECEIPTS—NOVEMBER 1ST, 1916, TO OCTOBER 31ST, 1917

Received on Lots Sold during Year.

Englehart	$703 45	
Dane	25 00	
Matheson	1,988 63	
Monteith	270 25	
Porquis Junction	769 00	
Cochrane	1,344 50	
		$5,100 83

Received on Lots Sold prior to November 1st, 1916.

Temagami	$30 00	
Cobalt	337 85	
Englehart	952 98	
Dane	52 50	
Matheson	388 98	
Monteith	183 25	
Porquis Junction	1,197 38	
Cochrane	1,923 50	
		$5,066 44

Interest Received on Deferred Payments.

Temagami	$10 00	
Cobalt	56 18	
Englehart	231 32	
Dane	2 81	
Matheson	185 17	
Monteith	30 40	
Porquis Junction	256 68	
Cochrane	536 12	
		$1,308 68
Interest received on bank deposits		227 47
Pulpwood sold from Englehart townsite		16 50
Pulpwood sold from Porquis Junction		88 50
Rent lots—Matheson		100 00
		$11,908 42

TOWNSITE ACCOUNTS.

Statement of Lots Sold—Townsites—Nov. 1, 1916, to Oct. 31, 1917.

—	Lots Sold.	Sale Price.		Amount Paid.	Balance due.
		$ c.	$ c.	$ c.	$ c.
Englehart.....	53	940 00			
	1 Parcel (95 Acres)	783 75			
	*1 " (2.10 ")	52 50			
	1 " (59 ")	619 50			
			2,395 75	703 45	1,692 30
Dane	2	.....	100 00	25 00	75 00
Matheson	20	966 00			
	1 Parcel (72 Acres)	1,080 00			
	1 " (266.64 ")	500 00			
	1 " (45 ")	4,545 00			
	1 " (156 ")	1,000 00			
	1 " (30 ")	3,330 00			
	1 " (50 ")	300 00			
			11,721 00	1,988 63	9,732 37
Monteith	14	585 00			
	1 Parcel.....	310 00			
			895 00	270 25	624 75
Porquis Junction..	1	44 00			
	1 Parcel (50 Acres)	1,000 00			
	1 " (50 ")	300 00			
	1 " (52 ")	200 00			
	1 " (150 ")	500 00			
			2,044 00	769 00	1,275 00
Cochrane	14	865 00			
	1 Parcel (140 Acres)	1,050 00			
			1,915 00	1,344 50	570 50
			19,070 75	5,100 83	13,969 92

* Portion of Right-of-Way sold.

Street scene, Iroquois Falls, Ontario, 1917.

Street scene, Iroquois Falls, Ontario, 1917.

Statement Showing Employees, Total Hours Worked, Total Compensation, Etc., Nov. 1st, 1916, to Oct. 31st, 1917.

No.	Classification of Employees	Number of Employees in Service at middle of each month named				Hours of Duty and Compensation			
		Jan.	April	July	Oct.	Average Number of Employees	Total Number of Hours on duty during year	Total Compensation during year	Average Hourly Compensation
								$ c.	$ c.
1	General Officers	18	18	18	17	18	41,317	41,623 60	1.01
2	Division Officers	16	16	16	15	16	39,984	24,964 31	.62
3	Clerks	181	179	183	192	184	488,399	133,086 19	.27
4	Messengers and Attendants	4	4	4	4	4	9,521	2,794 55	.29
5	Assistant Engineers and Draughtsmen	5	5	5	5	5	13,979	6,971 37	.50
6	M. W. &. S. Foremen	9	8	9	11	9	29,323	11,464 73	.39
7	Section Foremen	57	56	56	58	57	185,414	61,814 70	.33
8	General Foremen M. E. Department								
9	Gang and other Foremen M. E. Department	8	8	8	11	9	24,552	10,159 91	.41
10	Machinists	23	26	22	27	24	66,528	29,456 51	.44
11	Boilermakers	6	6	4	3	5	15,293	6,334 08	.41
12	Blacksmiths	6	5	6	4	5	14,818	5,532 87	.37
13	Masons and Bricklayers								
14	Structural Ironworkers								
15	Carpenters	52	49	62	67	57	171,300	59,089 25	.34
16	Painters and Upholsterers	13	14	18	16	15	44,956	14,995 94	.33
17	Electricians	8	10	12	10	10	30,323	10,272 23	.34
18	Air-Brake Men	2	2	2	1	2	4,414	1,459 09	.33
19	Car Inspectors	10	11	11	10	11	42,248	13,565 74	.32
20	Car Repairers	25	24	25	30	26	81,823	24,656 75	.30
21	Other Skilled Laborers	24	19	24	22	22	65,967	23,505 20	.36
22	Mechanics' Helpers and Apprentices	54	59	50	48	53	145,085	34,470 07	.24
23	Section Men	217	204	223	222	216	698,489	172,458 96	.25
24	Other Unskilled Laborers	46	40	61	58	51	153,891	37,828 34	.25
25	Foremen of Construction Gangs and Work Trains	3	1	3	3	2	9,722	4,061 63	.42
26	Other Men in Construction Gangs and Work Trains	24	10	31	36	25	101,192	27,437 47	.27
27	Travelling Agents and Solicitors								
28	Employees in Outside Agencies								
29	Other Traffic Employees								
30	Train Despatchers and Directors	4	4	4	4	4	11,320	9,405 46	.83
31	Telegraphers, Telephoners and Block Operators	20	20	21	21	20	73,955	27,409 79	.37
32	Telegraphers and Telephoners operating Interlockers								
33	Levermen (Non-Telegraphers)								
34	Telegrapher Clerks	3	4	4	4	4	10,618	3,941 48	.37

35 Agent-Telegraphers	21	21	18	18	19	61,747	26,797 30	.43
36 Station Agents (Non-Telegraphers)	7	7	9	10	8	23,287	13,543 27	.58
37 Station Masters and Assistants								
38 Station Service Employees	95	109	123	109	109	334,189	70,773 46	.21
39 Yardmasters	2	2	2	2	2	7,530	3,525 66	.47
40 Yardmasters' Assistants								
41 Yard Engineers and Motormen	7	7	6	7	7	25,580	12,507 19	.49
42 Yard Firemen and Helpers	7	7	6	7	7	25,580	7,856 71	.31
43 Yard Conductors (or Foremen)	7	7	6	7	7	26,085	11,296 29	.43
44 Yard Brakemen (Switchmen or Helpers)	14	14	9	10	12	46,971	18,881 56	.40
45 Yard Switch Tenders								
46 Other Yard Employees								
47 Hostlers	12	11	11	11	11	49,836	13,604 07	.27
48 Engine-House Men	49	50	42	42	46	159,624	39,865 91	.25
49 Road Freight Engineers and Motormen	23	25	18	23	22	69,424	45,759 04	.66
50 Road Freight Firemen and Helpers	24	28	20	25	24	68,868	28,781 24	.42
51 Road Freight Conductors	26	22	19	20	22	64,190	37,632 62	.59
52 Road Freight Brakemen and Flagmen	54	53	50	50	52	148,854	59,850 98	.40
53 Road Passenger Engineers and Motormen	14	10	12	10	12	26,264	22,647 81	.86
54 Road Passenger Firemen and Helpers	12	9	12	10	11	26,611	14,677 24	.55
55 Road Passenger Conductors	9	8	7	8	8	22,495	16,056 19	.71
56 Road Passenger Baggagemen	7	6	6	7	7	21,078	9,440 98	.45
57 Road Passenger Brakemen and Flagmen	8	9	10	8	9	21,631	10,002 96	.46
58 Other Road Train Employees								
59 Crossing Flagmen and Gatemen								
60 Drawbridge Operators								
61 Floating Equipment Employees								
62 Express Service Employees								
63 Policemen and Watchmen	2	2	2	1	2	5,402	1,967 50	.36
64 Other Transportation Employees								
65 All other Employees								
Total	1,238	1,209	1,270	1,284	1,251	3,809,677	1,264,228 20	.33
Enlistment Payroll							4,113 21	
Amount earned by Enginemen while in service of G. T. Ry.							5,626 13	
							1,273,967 54	

STATEMENT OF WAGES PAID EMPLOYEES, YEAR ENDED OCTOBER 31ST 1917.

Office of Secretary-Treasurer.

Maund, W. H.	Secretary-Treasurer	$2,750 00	
Odlum, A. B.	Chief Clerk	1,190 00	
Pratt, A. B.	Statistics—Insurance	1,800 00	
Downing, Miss A.	Stenographer	487 50	
McNeice, Miss H.	"	805 00	
Southby, Miss G.	"	367 50	
Odlum, Miss R.	"	703 39	
Brocklehurst, Miss H.	Clerk	457 50	
Way, Miss K.	Filing Clerk	300 00	
O'Brien, Miss A.	Temp. Stenographer	37 50	
Best, Miss G.	Filing Clerk	362 50	
Cameron, Miss K.	Stenographer	55 00	
Paterson, Miss V.	"	343 33	
Nugent, Miss P.	"	307 90	
Hurry, Miss E. M.	Clerk	74 00	
			$10,041 12

Office of Auditor of Disbursements and Accountant.

Gracey, T. J.	Auditor of Disb. and Accountant	$2,065 00	
Hamilton, D.	Assistant Accountant	1,585 00	
May, E. N.	Clerk	1,200 00	
Saunderson, G. S.	"	75 00	
Robinson, Miss S.	"	195 00	
Henaghan, Miss A.	Stenographer	75 81	
McPhee, Miss K.	Clerk	360 00	
Harris, Miss I. M.	"	360 00	
Martin, R.	Junior Clerk	376 83	
Kidd, Miss M.	Clerk	167 85	
Graham, Miss G. G.	"	714 50	
Norman, Miss H.	"	29 38	
DeWolfe, Miss J. C.	Stenographer	15 00	
Burgess, Miss M.	Clerk	513 71	
O'Brien, Miss A.	Temp. Stenographer	8 43	
Smith, Miss O.	Stenographer	145 97	
Hurry, Miss E. M.	Clerk	275 00	
Paterson, Miss V.	Stenographer	59 25	
Larkin, Miss A.	"	127 50	
McCartney, W. A.	Clerk	312 50	
Giles, Miss M.	Stenographer	196 00	
Dean, P. C.	Clerk	266 00	
Marcus, Miss R.	Stenographer	105 00	
Riches, Miss R.	"	11 67	
Ling, Miss G.	"	140 32	
Lord, Miss E.	"	138 71	
Smith, Miss M. L.	Clerk	93 33	
			$9,612 76

Office of Mining Engineer.

Cole, A. A.	Mining Engineer	$3,420 00	
Molyneau, Miss M.	Stenographer	780 00	
			$4,200 00

Land Department.

Lee, G. W.	Commissioner and Land Agent	$2,500 00	
Bauldry, W. J.	Townsite Inspector	1,440 00	
Gregory, Miss T.	Stenographer	840 00	
Bourke, Miss B.	"	50 00	
			$4,830 00

Office of Superintendent of Traffic.

Griffin, W. A.	Superintendent Traffic	$3,438 64	
Ryan, S. H.	Trainmaster	525 00	
McKerrow, J. O.	"	1,096 64	
Way, D. H.	Special Agent	266 13	
Chatterton, C. D.	"	217 74	
Faught, S. J.	Chief Clerk	609 50	
Freeman, A.	"	690 00	
Brown, C. F.	Clerk	308 57	
Bain, J.	"	895 00	
Brockway, W. L.	"	780 00	
Beaton, W. S.	"	454 11	
Foley, P. S.	"	243 88	
Thompson, W. A. S.	"	785 36	
Gregor, L.	"	65 80	
Gauthier, H.	"	191 77	
Lidkea, W. E.	"	38 17	
Amos, Miss A. C.	"	214 19	
Campbell, G.	"	4 52	
White, J. M.	"	36 67	
Newell, Miss M.	Stenographer	720 00	
Morgan, Miss P.	"	200 00	
Gregory, Miss K. E.	"	203 30	
Robertson, Miss I. M.	"	611 66	
Jessup, Miss A. L.	"	353 94	
Gairdner, Miss I. M.	"	290 00	
Brill, Miss L.	"	12 90	
Cairns, Miss J.	"	61 39	
Taylor, Miss K. M.	"	145 81	
Griffiths, Miss E.	"	3 33	
Swan, R.	Constable	1,087 50	
Brewster, L.	Porter	830 00	
Monette, A. P.	"	830 00	
Swain, W.	"	73 26	
Hume, Mrs. J.	Janitress	180 00	
Hume, J.	Janitor	870 00	
St. Dennis, P.	"	11 29	
			$17,346 07

Office of Auditor Receipts and Car Accountant and Freight Claim Agent.

Harper, W. J.	A. R. and C. A.	$1,570 00
Teskey, H. W.	"	1,500 00
McGee, H. H.	Trav. Auditor	1,660 00
Willis, J. B.	"	1,355 48
Palmer, G. E.	Claim Inv.	1,220 00
Brockway, H.	Clerk	1,000 00
Brennan, Miss J. B.	"	960 00
Gallagher, J. A.	"	960 00
Lavery, T. H.	"	960 00
Cartmill, G. H.	"	278 71
Douglas, M. B.	"	892 50
Jones, W.	"	865 00
Knapp, E. A.	"	770 00
Peel, R.	"	850 00
Trotter, A. T.	"	832 71
Cocksedge, G.	"	709 03
Kelly, T. J.	"	157 26
McEdwards, W.	"	800 00
Doidge, Miss M.	"	560 04
Rigby, Miss H.	"	572 58
Smith, G.	"	650 00
Winters, Miss G.	"	500 00
Campbell, Mrs. M.	"	560 00
Amos, Miss D. G.	"	535 00
Rayner, Miss J. E.	"	396 94
Brockway, Miss L.	"	205 26
Harrison, Miss C.	"	440 00

Office of Auditor Receipts and Car Accountant and Freight Claim Agent.—Continued.

Freeman, Miss B.	Clerk	$440 00	
Casey, Miss M.	"	580 00	
Hamilton, Mrs C.	"	440 00	
Osborne, Miss A.	"	440 00	
Sharpe, H. W.	"	503 33	
Miller, F.	"	145 13	
Burritt, R.	"	278 87	
Lefebvre, Miss R.	"	186 09	
Smith, Miss H.	"	15 55	
Winters, Miss V.	"	2 59	
Wilson, Miss N. R.	Stenographer	630 00	
Lefebvre, Miss A.	"	500 00	
Sherman, Miss M.	"	500 00	
			$26,422 07

Office of Paymaster.

Ferguson, C. L.	Paymaster	$2,360 00	
Cousineau, L. J.	C. Clerk	965 00	
Amos, Miss H. C.	Clerk	480 00	
			$3,805 00

Office of General Freight and Passenger Agent.

Parr, A. J.	G. F. and P. A.	$2,499 96	
Banks, E. C.	C. Clerk	1,205 00	
McLeod, R.	Clerk	685 00	
Burritt, W.	"	450 00	
Anderson, Miss F. R.	Stenographer	503 31	
Jessup, Miss A. L.	"	182 14	
Taylor, Miss E. L.	"	500 00	
Martin, Miss G. V.	"	376 07	
Cunningham, Miss M. E.	"	95 80	
Aubry, A.	Office Boy	125 00	
Devine, L.	"	137 50	
Fitzsimmons, G.	"	30 83	
			$6,790 61

Train Despatchers.

Lamb, R. L.	C. Despatcher	$2,220 00	
Chatterton, C. D.	Despatcher	189 33	
Workman, R. W.	"	2,269 41	
Trowhill, R. T.	"	2,247 96	
Dwyer, J. H.	"	2,030 15	
Pelkie, J. A.	Operator and Despatcher	983 01	
Cattley, B.	Operator	283 64	
Brown, A. W.	"	476 31	
			$10,699 81

Purchasing Agent and Stores Department.

Graham, W. A.	P. A. & S. K.	$2,520 00	
Alford, G. B.	C. Clerk	1,380 00	
Freeman, A.	Clerk	600 00	
Tarsey, S. G.	"	1,020 00	
Fletcher, D. R.	"	792 00	
Elston, E.	"	810 00	
Giroux, A.	"	150 48	
Hume, L.	"	356 13	
Darling, Miss E. J.	"	723 00	
McGonegal, Miss G.	Stenographer	32 20	
Crummie, Miss M.	"	374 93	
Brill, Miss M.	"	184 50	
Dreany, Miss L. M.	"	129 84	
Simpson, Miss D. W.	"	158 06	

Purchasing Agent and Stores Department.—Continued.

Watkins, W.	S. K., Englehart	1,080 00	
Sale, T. M.	Foreman	1,380 00	
Dignan, J. C.	Storeman	840 00	
Depledge, F.	"	840 00	
Bigg, J. E.	"	649 00	
Newman, A. C.	"	424 20	
Prue, A.	"	649 00	
Brown, E.	"	293 07	
Beckett, J.	"	61 67	
White, R.	"	113 90	
Cavanagh, A.	Inspector	782 50	
English, W.	"	1,142 45	
McManus, J.	Foreman	973 28	
Couch, A.	Laborer	607 80	
Labrecque, J.	"	685 60	
Pinkney, A.	"	102 44	
Willis, W. G.	"	94 60	
Cipparrone, S.	"	87 10	
Daly, D.	Blacksmith	105 30	
			$20,143 05

Freight Office, North Bay.

Baker, C. O.	Agent	$1,910 00	
King, A. T.	C. Clerk	416 12	
Cartmill, G. H.	"	583 93	
Gibson, R. M.	"	914 80	
Sullivan, M. J.	Cashier	935 00	
Axler, T.	Clerk	178 22	
Forrest, W., Sr.	"	925 00	
Forrest, W., Jr.	"	736 28	
McNutt, H.	"	760 00	
Lapointe, H.	"	705 80	
Willis, F.	"	474 07	
Fitzsimmons, G.	"	400 00	
Lansloot, R.	"	400 00	
Duncan, H.	"	530 16	
Wilson, C. J.	"	281 26	
Beatty, Miss I.	"	240 00	
Tompkins, J.	"	215 65	
Titterton, P.	"	316 61	
McGillis, A.	"	1 93	
Craig, S.	"	132 50	
Dickey, E.	"	253 42	
Devine, Miss N.	Stenographer	560 00	
Carr, Miss B.	"	560 00	
Fitzsimmons, G.	Messenger	7 22	
Coffee, D.	"	157 42	
Hawkins, C. S.	"	14 51	
Newell, L. A.	"	24 84	
Peever, J.	"	6 67	
Cangiano, N.	"	21 33	
Aubry, E.	"	12 58	
Girard, E.	"	12 96	
			$12,688 28

Freight Shed, North Bay.

Sharvell, F. W.	Foreman	$1,203 78
Ashford, S.	Timekeeper	874 30
Dugard, W.	Checker	186 71
Pike, F.	"	186 92
Pratt, C.	"	836 31
Cox, J.	"	129 26
James, V.	"	754 97
Jones, R. J.	"	756 42
Webber, S.	"	873 53

Freight Shed, North Bay.—Continued.

Gauthier, O.	Checker	$515 98	
McLean, J.	"	397 33	
Demeza, G.	"	6 29	
Rogers, A. E.	"	395 82	
Cholette, M.	"	358 60	
Truckers, Stowers, Labourers, etc.		21,301 10	
			$28,777 32

Yard Office, North Bay Junction.

Ness, C.	Yardmaster	$1,670 97	
Richmond, J. N.	"	1,666 45	
Bradford, J, N.	"	178 24	
Roberts, C. A.	Operator	1,375 78	
Dudley, H. A.	"	1,366 16	
Cattley, B.	"	1,044 08	
Oulette, A.	"	163 64	
Vicary, W. G.	"	130 58	
Simms, A. E.	"	210 91	
Thompson, W. A. S.	C. Clerk	309 64	
Wissler, J. S.	"	966 96	
Sampler, W.	"	580 89	
Donegan, J. C.	Clerk	730 00	
Brown, D.	"	535 57	
Elston, F.	"	832 94	
Edey, J	"	579 68	
Archambault, O.	"	161 56	
Daly, R. L.	"	160 77	
Dickey, E.	"	121 96	
Wright, W. T.	Checker	800 00	
Herbert, R.	"	112 90	
Soule, A.	"	149 56	
McGillis, A.	"	524 42	
Barnhart, J.	Scaleman	498 41	
McDevitt, L. C.	"	440 77	
Lapointe, E.	Messenger	283 59	
Tindall, N.	"	239 21	
Stephenson, G.	"	80	
Raymond, E. M.	"	18 77	
Lariviere, A.	"	49 19	
Willis, G.	"	59 19	
Trucheon, A.	"	20 00	
Peever, J.	"	27 50	
Girard, E. J.	"	1 61	
Pratt, A.	"	7 26	
Dubois, C. H.	"	244 13	
Soule, F.	"	64 72	
Wilson, C. J.	"	5 97	
Fitzsimmons, G.	"	79 33	
Jones, F.	"	80	
Leishman, C.	"	2 42	
Didier, O.	"	219 13	
Fitzsimmons, D.	"	7 02	
Adshead, H.	"	247 71	
Colbon, W.	Janitor	300 00	
Martino, G.	Scavenger	2 00	
Kullock, A.	"	2 00	
			$17,195 19

Widdifield Station.

Deagle, L. A.	Agent	$986 66	
Craig, S.	R. Agent	164 55	
McCloskey, G. E.	"	3 00	
Marshall, R. S.	"	6 00	
			$1,160 21

Tomiko Station.

Smith, A. J.	Agent	$1,192 17	
Murphy, E. M.	R. Agent	45 11	
Durand, J. B.	Operator	20 33	
McCloskey, G. E.	"	1,016 27	
			$2,273 88

Diver Station.

Black, W. R.	Agent	$238 85	
Baker, T. J.	"	18 45	
Donlon, Mrs. J.	Janitress	4 00	
			$261 30

Redwater Station.

Baker, T. J.	Agent	$1,178 42	
Murphy, E. M.	R. Agent	56 19	
			$1,234 61

Temagami Station.

Clark, M. G.	Agent	$1,224 41	
Marshall, R. S.	R. Agent	111 06	
Rodgers, G. P.	Baggageman	47 10	
Santor, Mrs.	Janitress	37 00	
Derosier, Mrs. W. J.	"	10 00	
Ferguson, W. J.	Janitor	5 00	
			$1,434 57

Latchford Station.

Richardson, R.	Agent	$1,501 08	
Black, W. R.	R. Agent	22 09	
Marshall, R. S.	"	112 89	
Murphy, E. M.	"	56 70	
Audet, E. J.	Operator	11 41	
Switzer, H. R.	"	893 18	
Sullivan, T. W.	Scavenger	5 00	
			$2,602 35

Cobalt Station.

Way, D. H.	Agent	$1,563 87	
Nixon, E.	C. Clerk	1,213 35	
Carter, W.	Cashier	772 25	
Earle, W. R.	Operator	1,427 97	
Mayer, M.	Clerk	616 45	
Lawrence, Miss R.	"	93 22	
Fitzgerald, J.	"	158 93	
Downard, F.	"	801 40	
Brewer, L.	"	47 90	
Dowell, Miss P.	"	386 37	
Gregor, M.	"	10 83	
Mortson, R. C.	"	600 51	
Simpkins, W.	"	120 00	
Cassie, Miss M.	"	507 42	
Gregor, L. D.	"	531 61	
Joanisse, G.	"	95 54	
Hunter, I. L.	"	50 00	
Way, W. K.	Checker	225 00	
Gorman, J. T.	"	228 66	
Drolette, R. C.	"	152 32	
McMichael, F.	"	20 15	
Maidens, F.	"	159 13	
Oulette, A.	"	74 35	
Chalut, J.	"	74 36	

Cobalt Station.—Continued.

Barnes, F.	Checker	$3 12	
Clark, S.	"	103 54	
Boileau, E.	"	110 83	
Charnick, Miss R.	Stenographer	134 84	
Brown, A. W.	T. Clerk and Operator	185 04	
Laurin, J. A.	Constable	25 00	
Bowman, J.	"	845 00	
Whitehead, H.	Baggageman	880 00	
Bywaters, H.	S. Foreman	946 58	
Lejambe, W.	Trucker	343 00	
Champagne, A.	"	254 55	
Sweeney, H. J.	"	2 00	
Nixon, G.	"	337 95	
Forget, E.	"	30 25	
Perrier, M.	"	203 31	
Mayer, E.	"	105 04	
Constantineau, W.	"	170 95	
Procos, C. J.	"	52 26	
Devine, R.	"	12 42	
Marantjis, S.	"	130 58	
Gaequin, G.	"	40 27	
Miron, O.	"	120 37	
Bradowski, L.	"	3 71	
Fateaux, A.	"	38 44	
Smith, W.	"	13 91	
Gosselin, Y.	"	5 56	
Plaunte, S. L.	"	7 42	
Taylor, C.	"	103 33	
Barnes, A.	"	99 24	
St. Dennis, E.	"	15 33	
Perrin, C.	"	20 40	
Andresaks, A.	"	4 81	
Bartlett, Mrs. M.	Janitress	492 00	
			$15,772 64

North Cobalt Station.

Gibbon, Geo.	Agent	$1,162 14	
O'Brien, H.	Scavenger	34 00	
			$1,196 14

Haileybury Station.

Shibley, J. H.	Agent	$1,683 20	
Marshall, R. S.	Operator	45 80	
Trousdale, F.	"	1,147 61	
Brown, A. W.	"	73 31	
Copner, J. M.	C. Clerk	936 13	
Wattam, Miss M. I.	Clerk	627 50	
Hoolihan, C.	"	219 35	
Roach, Miss M.	"	565 00	
Floody, Miss L.	"	67 32	
Mortson, R. C.	"	37 74	
Dickson, A.	S. Foreman	19 50	
Moore, M.	Checker	406 46	
Shibley, L. K.	"	72 40	
Devenney, R. M.	"	124 25	
Boyer, L. E.	Trucker	3 22	
Murray, J. L.	"	601 05	
Edwards, T.	"	537 42	
Duffett, S.	Baggageman	450 00	
Spence, Mrs. C. M.	Janitress	15 00	
			$7,632 26

New Liskeard Station.

Milne, W. B.	Agent	$1,397 90	
Goodman, E. M.	"	314 17	
Marshall, R. S.	R. Agent	48 33	

New Liskeard Station.—Continued.

Holt, F. G.	Operator	1,132 56	
Murphy, E. M.	"	54 67	
Durand, J. B.	"	993 88	
Clark, P. G.	"	40 44	
Simms, A. E.	"	74 19	
Ramsay, W. J.	Cashier	850 00	
Stafford, E. I.	Clerk	650 00	
Hogg, A.	"	769 03	
Wolfe, P.	Baggageman	690 00	
Wilson, S.	S. Foreman	266 29	
Hansman, A.	Checker	380 66	
McRoberts, F.	Messenger	175 82	
Kingyen, C.	"	83 47	
Linghorn, G.	"	55 00	
Ball, H.	"	50 00	
McMillan, P.	Janitor	430 00	
			$8,456 41

Uno Park Station.

Doherty, M. R.	Agent	$1,140 93	
Marshall, R. S.	R. Agent	55 27	
			$1,196 20

Thornloe Station.

Caldwell, W. H.	Agent	$1,267 58	
			$1,267 58

Earlton Station.

Buchanan, L.	Agent	$1,269 11	
Bruce, Geo.	R. Agent	2 65	
Marshall, R. S.	"	22 08	
Murphy, E. M.	Operator	150 83	
Blanchette, N. J.	Clerk	620 00	
Garovitch, M.	Scavenger	20 00	
			$2,084 67

Elk Lake Station.

Belanger, O.	Agent	$1,417 27	
Tuch, J. S.	Clerk	35 18	
Champagne, L.	Checker	30 92	
Staniski, Mrs. T.	Janitress	60 00	
Staniski, T.	Scavenger	10 00	
			$1,553 37

Heaslip Station.

Chouinard, J.	Agent	$1,052 02	
Marshall, R. S.	R. Agent	72 01	
			$1,124 03

Englehart Station.

Murray, F. J.	Agent	$1,424 29	
Pelkie, J. A.	Operator	417 99	
Bruce, Geo.	"	1,600 89	
Marshall, R. S.	"	78 49	
Black, W. R.	"	49 38	
Vanmeer, E. W.	"	1,092 39	
Murphy, E. M.	"	86 97	
Simms, A. E.	"	223 96	
Errett, F. A.	C. Clerk	810 00	
Ellis, Miss O.	Stenographer	508 01	
Fennell, J. C.	Baggageman	45 00	
Pullan, A.	"	573 44	

Englehart Station.—Continued.

Monkhouse, T. S.	S. Foreman	954 83	
Nudds, G. T.	Checker	327 23	
Wright, T.	"	509 57	
Peever, R. R.	"	52 77	
Phillips, W.	"	10 92	
Valliere, J.	Trucker	13 00	
Stephenson, G.	"	167 96	
Atkinson, H. C.	"	9 00	
Pullan, C.	"	338 22	
Vreeland, E.	"	684 09	
Price, A.	"	701 00	
Stephens, D. R.	"	459 76	
Free, W.	"	695 86	
Antram, W.	Call Boy	3 33	
Bentley, R.	"	59 70	
Ward, W.	"	296 61	
Silver, S.	"	58 86	
Rowe, C.	"	181 45	
Price, T.	Janitor	593 06	
Garovitch, M.	Scavenger	2 50	
Penn, C.	Special Officer	49 50	
			$13,080 03

Charlton Station.

Price, J. T.	Agent	$1,206 75	
Audet, E. J.	R. Agent	57 45	
Rodgers, G. P.	Clerk	267 58	
Barr, C.	"	37 26	
			$1,569 04

Dane Station.

Marshall, C.	Agent	$1,114 95	
Craig, S.	R. Agent	89 17	
Murphy, E. M.	"	41 16	
			$1,245 28

Swastika Station.

Brennan, W. W.	Agent	$1,333 88	
Marshall, R. S.	R. Agent	271 72	
Murphy, E. M.	Operator	12 86	
Fisher, H. R.	Clerk	181 94	
Moore, T. F.	"	691 61	
Stephenson, H.	"	281 81	
Queeneville, S.	"	90 00	
Boivin, Miss E.	Tel. Operator	286 77	
Furlong, Miss A.	"	438 07	
Fedock, W.	Scavenger	5 00	
			$3,593 66

Bourkes Station.

Valliere, J. L.	Operator	$1,178 47	
Audet, E. J.	R. Operator	39 70	
			$1,218 17

Matheson Station.

Ackerman, T. R.	Agent	$879 61	
Beemer, F. B.	"	390 32	
Allan, J. D.	"	46 23	
Black, W. R.	Operator	718 90	
Murphy, E. M.	"	84 50	
Simms, A. E.	"	44 64	

Matheson Station.—Continued.

Leach, J. M.	Clerk	79 03	
Johnston, L. C.	"	152 90	
Roach, Miss H.	"	262 86	
Wilson, E.	"	407 03	
Cameron, R.	"	358 00	
Brown, W.	"	295 80	
Monahan, Miss R. M.	"	310 48	
Ludford, Miss L.	"	150 51	
Cousineau, Miss F.	Stenographer	416 34	
Compeau, C.	Messenger	12 90	
Woods, F.	"	72 90	
Kingston, Mrs. J.	Janitress	71 25	
			$4,754 20

Porquis Junction Station.

Beemer, F. B.	Agent	$1,014 32	
Milne, W. B.	"	240 48	
Marshall, R. S.	R. Agent	231 13	
Vanmeer, E. W.	Operator	353 19	
Beemer, J. H.	"	1,037 36	
Vicary, W. G.	"	123 22	
Fisher, E. C.	"	263 74	
Craig, S.	"	203 01	
Clark, P. G.	"	276 09	
Harper, R.	Baggageman	82 00	
Dinsmore, W.	"	25 67	
McConomy, J. K.	Clerk	219 55	
Beatty, H.	Baggageman	618 39	
Hess, D.	Checker	768 89	
Hooey, L.	"	76 65	
MacDonald, G.	"	428 13	
Green, G. J.	"	263 08	
Patterson, W. A.	"	244 58	
Jenson, V.	"	49 68	
Ludford, Miss L.	Tel. Operator	303 87	
Ludford, Miss A.	"	439 52	
Nolting, Miss M.	"	136 61	
Nolting, Mrs. C.	Janitress	120 00	
			$7,519 16

Iroquois Falls Station.

Chatterton, C. D.	Agent	$1,033 23	
Sherlock, G. L.	"	258 18	
Hunter, I. L.	C. Clerk	1,029 45	
Calder, A.	Clerk	552 20	
Curtis, J. W.	"	483 50	
Kirch, H.	"	198 71	
Gregor, M. M.	"	532 50	
Gregor, R. M.	"	336 92	
Leitch, J. M.	"	40 00	
Mortson, R. C.	"	269 73	
Downey, P.	"	49 22	
Stevens, A. B.	"	114 52	
Litfle, F. T.	"	94 19	
Samler, W.	"	60 00	
Miller, F. J.	"	16 85	
Stevens, M.	Stenographer	36 11	
Ludford, Miss L. D.	"	75 83	
Fisher, E. C.	Operator	277 87	
Brasher, S. M.	"	561 88	
Vicary, W. G.	"	463 19	
Simms, A. E.	"	59 79	
Rose, H.	Baggageman	73 63	
Charbonneau, J.	"	523 54	

Iroquois Falls Station.—Continued.

Green, C. J.	Baggageman	$4 84	
Currie, L. R.	"	289 52	
McLeod, R.	S. Foreman	351 61	
Stevenson, H.	"	353 94	
Barr, W. B.	Checker	96 80	
Clark, P.	"	118 87	
Rooley, A.	"	503 22	
Roy, J.	"	19 35	
Philion, F.	"	230 33	
Barnes, F.	Trucker	179 50	
Bond, B.	Messenger	45 00	
Chatterton, C. D., Jr.	"	34 11	
Johnston, C.	"	87 32	
Gayette, N.	"	9 44	
Libby, H.	"	20 00	
Dalista, E.	Janitor	20 00	
Lacroix, Mrs. A.	Janitress	2 00	
			$9,506 89

Connaught Station.

Picard, J. W.	Agent	$415 37	
Audet, E. J.	R. Agent	49 03	
			$464 40

Porcupine Station.

Picard, J. W.	Agent	$759 39	
			$759 39

South Porcupine Station.

Varrett, E. J.	Agent	$1,670 02	
Murphy, E. M.	R. Agent	98 02	
Brown, H. G.	Operator	1,351 88	
Simms, A. E.	"	48 95	
Audet, E. J.	Clerk	466 29	
Stewart, J. T.	"	136 50	
Dunne, J. A.	Baggageman	234 84	
Barnes, E. A	"	28 89	
McLeod, R.	"	408 38	
Longworth, G. M.	Shedman	920 00	
Hurtubise, R.	"	423 00	
Hughes, R.	"	16 00	
Gervais, A.	"	3 23	
McLeod, Mrs. E.	Janitress	42 52	
			$5,848 52

Schumacher Station.

Hawkins, J. A.	Agent	$1,568 51	
Murphy, E. M.	Operator	192 42	
Assad, K.	Clerk	84 62	
Sammon, U.	"	597 33	
Hawkins, E.	"	17 33	
Kitchen, S. J.	"	55 37	
			$2,515 58

Timmins Station.

Allan, J. D.	Agent	$1,460 62	
Brown, A. W.	"	176 37	
Clark, P. G.	Operator	129 25	
Shankman, S.	"	1,086 04	
Swayne, A. R.	"	839 68	
Vicary, W. G.	"	243 64	
Marshall, R. S.	"	44 71	

Timmins Station.—Continued.

Donohue, J.	C. Clerk	1,013 33	
Bergeron, J. S.	Clerk	116 13	
Armstrong, R. W.	"	444 06	
Angell, F.	"	14 00	
Leitch, J. M.	"	896 27	
Clark, P.	"	264 12	
Parent, M. J.	"	54 95	
Mortson, R. C.	"	50 23	
Donaldson, E. M.	"	7 78	
Donavon, M.	Stenographer	21 67	
Larocque, A.	Messenger	314 97	
Brazeau, E.	"	7 00	
Poitras, E.	"	8 17	
Brown, K.	"	394 10	
Brown, W.	"	224 38	
Teed, M.	"	4 17	
Ayoub, H.	"	44 33	
Craig, P.	Paggageman	14 67	
Patterson, W. A.	"	126 80	
Clark, H. W.	"	92 67	
Fulton, G.	S. Foreman	995 19	
McConomy, J. K.	Checker	10 83	
MacDonald, G.	"	795 49	
Nixon, A.	"	724 67	
Gervais, A.	"	211 21	
Abramson, J. E.	Janitor	39 52	
Nixon, Mrs. A.	Janitress	239 14	
Kivesto, Mrs. S.	"	40 86	
			$11,151 02

Cochrane Station.

Brown, A. W.	Agent	$498 75
King, A. T.	"	1,265 44
Bernier, J. A.	C. Clerk	1,077 17
Drinkwater, L.	Clerk	999 00
Grasser, H. J.	"	746 93
Gagnon, A.	"	392 09
Cummings, A.	"	188 57
Williams, R.	"	471 50
Millman, R.	"	81 29
Thompson, J. C.	"	39 00
Axler, T.	"	838 90
Roach, A. H.	"	310 16
Sullivan, E.	"	12 83
O'Neil, Miss T.	Stenographer	5 32
Crummie, Miss M.	"	102 00
Archer, Miss P. A.	"	49 20
Cousineau, Miss F.	"	99 77
Lockhart, Miss G.	"	339 00
Robinson, E.	Operator	1,523 66
Brasher, S. M.	"	448 22
Marshall, R. S.	"	59 71
Cattley, B.	"	10 43
Fisher, E. C.	"	673 32
Murphy, E. M.	"	408 27
Williams, J.	Messenger	141 28
Hewson, J.	"	407 64
Brazeau, L.	"	207 00
Hewson, W.	S. Foreman	399 81
Drinkwater, B.	"	68 70
Halloran, J. A.	"	275 48
Livsey, T.	"	361 44
Moore, S.	Checker	320 64
Waldron, G.	"	223 55
Cavanagh, J. N.	"	465 35

Cochrane Station.—Continued.

Pawson, W. G.	Checker		$562 65	
Madden, R.	"		27 09	
Queenville, S.	"		127 74	
Young, M. A.	"		107 23	
Belliveau, J.	"		219 00	
Presby, O. K.	"		128 87	
Johnston, F.	Baggageman		743 00	
Lebarron, O. L.	Trucker		119 76	
Lawson, G.	"		1 45	
St. John, E.	"		213 67	
Patterson, V.	"		7 50	
Stiller, L.	"		97 42	
Boivin, L.	"		155 48	
Mongrain, L.	"		14 19	
Perreault, A.	"		26 61	
Miller, P. F.	"		57 29	
Smith, J. A.	"		83 23	
Marsh, W.	"		8 87	
Wilson, R.	"		3 55	
Barnes, E. A.	"		3 87	
Morin, I.	"		17 70	
Sullivan, E. E.	"		55 00	
Mulligan, E. F.	Loader		78 06	
Moore, A.	Call Boy		23 47	
Chetrier, O.	"		7 81	
Eaton, W.	"		16 67	
Eaton, D.	"		11 11	
Bennett, F.	"		72 78	
Sanderson, G.	"		190 83	
Grasser, A.	"		34 76	
Cavanagh, C.	"		26 51	
Pert, W.	Janitor		740 00	
Drake, E.	"		722 58	
Marchand, B.	"		6 43	
				$18,223 60

Shelter Stations.

Daly, J.	Attendant		$60 00	
Hoffman, Mrs. R.	"		20 00	
Tivy, Mrs. C.	"		30 00	
Schlievert, G.	"		120 00	
Delledonne, J.	"		25 00	
Goodfellow, Mrs. R.	"		60 00	
Labelle, F.	"		60 00	
Burnett, W.	"		120 00	
Mitchell, J. B.	"		120 00	
Fillmore, J.	"		120 00	
Bateman, S.	"		70 00	
Johnston, J.	"		72 14	
Cohen, L.	"		70 00	
Lalonde, T. A.	"		70 00	
Blackburn, Mrs. G.	"		30 00	
Young, Mrs. A. L.	"		31 17	
King, C.	"		50 00	
Gervais, A.	"		35 00	
Bouck, R. N.	"		20 00	
				$1,183 31

Conductors.

Nidd, J. T.	Conductor		$1,753 83
Newell, A.	"		1,794 98
Murray, P. J.	"		1,791 76
Graham, H. F.	"		1,890 49
McParland, T. J.	"		1,696 72

Conductors.—Continued.

Hamilton, T.	Conductor	1,652 17
Gillespie, J.	"	1,962 23
Sheppard, E. E.	"	1,841 96
Jessup, J. H.	"	2,114 27
Reesor, A. B.	"	2,231 91
McKerrow, G. W.	"	1,964 39
Cockerline, J.	"	1,358 94
Miller, A.	"	1,950 17
Lillie, O.	"	1,676 21
Nixon, W.	"	1,987 97
McConomy, E. J.	"	2,223 52
Rouble, A.	"	1,735 05
Sullivan, H.	"	1,528 38
Thomas, H.	"	1,497 45
Bourrette, J. W.	"	951 64
Stoughton, N.	"	1,214 91
Steinhoff, J. A.	"	1,584 07
Loney, W.	"	498 61
Miller, J. S.	"	1,988 60
Leckie, J. W.	"	1,535 28
Atkinson, H.	"	893 21
Aubrey, J. N.	"	1,603 38
Bradford, J. N.	"	1,280 23
Archer, H. A.	"	1,474 96
Treacy, W. L.	"	1,420 60
Dubois, C. H.	"	389 12
St. Louis, F.	"	527 66
Robinson, E.	"	1,550 85
Manning, W.	"	731 76
Pringle, G.	"	108 08
Beaudet, J. A.	"	654 37
McKerrow, J. O.	"	523 80
Campbell, W. A.	"	711 18
Kennedy, J.	"	568 60
Connell, J. S.	"	1,565 75
Campbell, T. J.	"	1,385 96
Holland, J.	"	248 95
Francis, S.	"	90 89
Dorschner, A.	"	223 00
Vaillaincourt, W.	"	19 04
Flegg, R.	"	1,595 21
McTavish, R.	"	1,686 59
King, A. W.	"	396 05
King, E. J.	"	41 54
Lett, W.	"	50 33
Edwards, W. J.	"	115 26
Ryan, H.	"	140 19
Croghan, J. B.	"	696 93
Perreault, G.	"	4 56
Kerr, C. D.	"	26 05
Ferrier, G.	"	222 48
Cameron, A.	"	30 14
McMahon, F.	"	655 38
Barrett, P. J.	"	499 03
Copps, R. W.	"	36 28
Kilroy, P.	"	115 50
Doherty, T. J.	"	44 27
Eheler, E. G.	"	35 64
Fisher, W.	"	10 56
Fisher, R.	"	113 45
Richmond, J. N.	"	10 08
Wall, A. H.	"	5 28
Sullivan, K.	"	10 54
Perreault, G.	"	46 86
		$64 985 10

Brakemen.

Lee, G.	Brakeman		$1,137 41
McQuestion, W. A.	"		1,062 05
Edwards, A. S.	"		1,101 84
Seguin, W. J.	"		1,239 96
Downey, M. J.	"		1,242 25
Coburn, G.	"		1,240 50
Cockerline, A. S.	"		1,124 96
Thurlow, J. E.	"		1,104 03
Aubry, H. J.	"		1,077 57
Durack, D. B.	"		1,266 10
Winters, W. R.	"		1,324 17
Allan, J.	"		1,163 32
Kilroy, P. B.	"		1,065 83
Francis, S.	"		1,270 77
Holland, J.	"		1,185 32
Lett, W.	"		1,466 64
Dorschner, A.	"		1,156 10
Ryan, H.	"		1,120 95
Edwards, W. J.	"		1,333 24
Sullivan, K.	"		1,389 50
Ferrier, G.	"		1,118 42
Fleming, R.	"		1,217 70
Doherty, T. J.	"		1,252 67
Fisher, R. E.	"		1,114 62
Bailey, J.	"		1,210 92
Copps, R. W.	"		1,403 99
Treacy, W. L.	"		231 09
King, A. W.	"		998 24
Gauthier, A.	"		1,054 80
Dubois, C. H.	"		1,228 47
King, E. J.	"		1,356 82
Pringle, N.	"		907 65
Commerford, D. T.	"		1,138 59
Simms, P.	"		1,116 01
Pringle, G.	"		1,343 63
Chambers, W. H.	"		1,128 75
Wallace, F.	"		214 68
Fleury, G.	"		961 15
O'Hara, J.	"		1,242 21
O'Toole, G.	"		1,144 90
Foster, W. F.	"		1,167 70
Larone, A. T.	"		1,093 62
Spencer, W. L.	"		1,409 18
Fraser, E.	"		1,045 33
Campbell, W. A.	"		722 15
James, R.	"		1,204 02
Farmer, A.	"		1,235 50
Farmer, W.	"		1,143 72
Pigeau, E.	"		655 14
Tetreau, E.	"		488 43
Scott, F. J.	"		1,071 54
Kerr, C. D.	"		1,370 20
Hollands, W.	"		1,209 58
Doyle, H. J.	"		558 07
McEachern, A.	"		234 79
Vallier, J.	"		837 06
Caley, C.	"		873 55
Vaillancourt, W.	"		503 29
Perreault, G.	"		848 35
Biglow, E.	"		1,221 28
Wall, A. H.	"		1,431 00
McCaughan, L.	"		345 89
Smith, G. A.	"		385 50
Hickey, W. J.	"		860 88
Lennox, S.	"		1,032 36

Brakemen.—Continued.

Peden, A.	Brakeman		$891 29
Belec, A.	"		750 95
Lewis, W. L.	"		838 37
Bourette, W. J.	"		732 67
Kennedy, J.	"		1,025 90
Denault, W.	"		1,199 28
Thom, W.	"		692 94
McArthur, N. R.	"		1,081 21
Eheler, E. G.	"		1,002 04
Fisher, W.	"		1,056 25
Childerhose, W.	"		1,459 32
O'Connell, J.	"		240 65
Irvine, A.	"		1,239 00
Keats, W.	"		254 04
Sharpe, R. M.	"		176 57
Biers, J.	"		1,061 40
Wagner, H. W.	"		1,019 97
Croghan, J. B.	"		144 82
Graham, W. A.	"		53 95
Traverse, F.	"		143 73
Johnston, A.	"		1,147 06
Castor, D.	"		319 29
Brown, M.	"		376 81
McCarthy, J.	"		214 91
Mayhew, W. J.	"		19 29
Barrett, P. J.	"		745 95
Banks, R.	"		1,072 16
McMahon, F.	"		692 51
Connell, R. T.	"		809 71
Archer, H. A.	"		55 30
Sullivan, H.	"		205 16
Cameron, A.	"		1,178 65
Brennan, L.	"		93 75
Lavoys, J.	"		471 80
Cameron, E. M.	"		644 17
Nixon, W.	"		7 93
Johnston, R. A.	"		18 79
Samler, W.	"		186 72
Conroy, J. A.	"		698 96
Lillie, O.	"		67 70
Leckie, R.	"		942 95
McDonald, J.	"		188 60
St. Louis, F.	"		940 06
Leckie, J. W.	"		64 78
Loney, W.	"		498 38
Manning, W.	"		79 44
Chambers, A. J.	"		682 31
McAughey, T. J.	"		622 55
Johnston, I. W.	"		544 35
Spence, E. J.	"		587 89
Empie, B. E.	"		43 61
Green, D.	"		169 02
Sommerville, J.	"		137 05
McAuley, N. J.	"		107 28
Biglow, J.	"		77 25
Kerr, B. E.	"		34 48
Jarvis, A.	"		14 94
Thompson, G.	"		4 62
			$98,176 48

Engineers.

Morgan, F.	Engineer		$2,152 58
Shaw, L. G.	"		2,077 15
Donohue, J.	"		1,889 38
Fry, J.	"		2,065 05

Engineers.—Continued.

McLeod, A.	Engineer	$2,047 30	
Coombs, G.	"	2,080 07	
Thomas, W.	"	1,471 07	
Ross, W.	"	2,209 84	
Holland, J.	"	1,492 80	
Newman, A.	"	1,667 80	
Johnston, J. A.	"	1,830 59	
Millman, W. C.	"	1,860 89	
Wilson, J. T.	"	2,479 22	
McMillan, N.	"	2,640 47	
Currie, N.	"	635 31	
Copeland, J. E.	"	1,402 86	
Johnston, J. C.	"	1,905 97	
Hill, T. H.	"	2,182 11	
Ward, A.	"	1,912 19	
McKenzie, H. W.	"	1,780 60	
McElhaney, H.	"	2,633 58	
Thomas, F.	"	2,006 55	
Filiatrault, Z. E.	"	1,978 33	
Plaus, W.	"	1,966 19	
Nornabell, E. A.	"	1,911 97	
Kirk, F. G.	"	1,687 86	
Langlois, J.	"	1,592 11	
Nolan, P. B.	"	1,817 65	
Durkin, J. T.	"	2,520 80	
Hermeston, H.	"	1,772 80	
McGovern, H. E.	"	858 54	
Morris, J.	"	1,636 23	
Bedard, S.	"	1,987 53	
Leishman, E. G.	"	2,068 21	
Reynolds, H.	"	1,922 94	
Nudds, G.	"	903 90	
Biggs, J.	"	1,666 90	
Newman, S. B.	"	1,817 21	
McEwan, S.	"	883 37	
Connell, W. D.	"	689 22	
Moore, A.	"	352 15	
Jackson, I.	"	1,932 80	
Tripp, G.	"	766 06	
McMenemy, A.	"	1,518 94	
McElhaney, A.	"	1,680 66	
Lackie, S.	"	2,145 19	
Vincent, R.	"	562 27	
McKerrow, J. E.	"	1,990 49	
McKenzie, A. B.	"	285 90	
Beauchamp, H.	"	27 37	
McLeod, J. M.	"	810 71	
Lewis, H.	"	76 99	
McCallum, J.	"	32 47	
Brooks, G.	"	5 66	
Vernon, A.	"	5 66	
			$84,298 46

Firemen.

McElhaney, A.	Fireman	$86 25	
McMenemy, A.	"	33 71	
Moore, A.	"	900 83	
Lewis, H.	"	1,504 78	
McKenzie, A. B.	"	998 83	
Biers, G.	"	1,240 48	
Beauchamp, H.	"	1,367 67	
Muldoon, T.	"	1,237 76	
Woollings, T.	"	1,017 41	
McKenney, J.	"	1,244 72	
Dods, J.	"	1,417 23	

Firemen.—Continued.

Gentile, A.	Fireman		$1,144 73
Byers, P.	"		1,398 94
Brooks, G.	"		1,232 84
Kelly, H.	"		1,126 33
Tripp, G.	"		1,017 49
Nudds, G.	"		234 76
Anderson, J.	"		1,100 44
Vernon, A.	"		1,063 80
Savard, E.	"		1,509 06
McDonald, M. J.	"		1,222 68
Bebee, T. A.	"		1,410 05
Drury, H. M.	"		832 19
Chambers, J. W.	"		1,110 01
McLennan, E.	"		1,061 60
Romaine, D. C.	"		908 80
Vinette, D.	"		1,120 14
Woods, W.	"		209 11
Humphrey, W.	"		1,220 02
Quinn, D.	"		1,214 84
Ryan, J.	"		978 82
Quinn, P.	"		1,382 47
Gard, W. I.	"		1,270 13
Clark, F.	"		1,158 75
Mahaffy, A. W.	"		1,120 53
Vincent, R.	"		905 18
McEwan, S.	"		747 87
Brooks, A. W.	"		1,016 92
Floyd, E.	"		723 30
Haskins, G. K.	"		707 34
McKerrow, J. E.	"		154 14
McKenzie, H. W.	"		144 09
Arquette, S.	"		212 28
Jackson, I.	"		53
McLeod, J. M.	"		779 05
Pepin, A.	"		30 16
Fox, A. J.	"		56 04
Cameron, H.	"		325 88
Brooks, S.	"		30 85
Murray, W.	"		772 55
Woods, A.	"		984 21
Vreeland, C.	"		1,116 75
Beasley, W.	"		360 93
Brown, F. J.	"		47 88
Smith, F.	"		53 03
Britton, L.	"		20 28
Empie, C.	"		1,102 55
McAuley, J.	"		104 92
Watters, P. A.	"		274 79
Lacey, C. F.	"		20 34
Vincent, R.	"		80 19
Lind, T.	"		741 46
Carr, H.	"		69 63
Tuck, A.	"		3 08
Porter, T.	"		19 42
Brown, S.	"		610 80
McDonald, K.	"		4 35
Belleveau, J.	"		462 35
Hamilton, J.	"		637 99
McAllister, T. E.	"		226 22
Hermeston, G. H.	"		207 32
Cragg, L.	"		112 21
Legary, J.	"		102 02
Sasseville, P.	"		101 78
Kay, G.	"		445 87
Levell, A.	"		30 48
Latimer, W.	"		45 74

Firemen.—Continued.

Ley, W.	Fireman	$169 27	
Aubin, E. D.	"	15 92	
Sholtz, O.	"	243 92	
Westfall, G.	"	24 86	
Gosselin, H.	"	131 21	
Landers, J.	"	71 80	
Foisy, T.	"	60 65	
Ames, F.	"	110 88	
Pringle, A.	"	134 89	
Landers, M. P.	"	518 99	
Waldron, G.	"	13 52	
McKenzie, H. W.	"	17 74	
Cameron, H.	"	23 78	
Biggs, J.	"	222 84	
Solway, E.	"	59	
Thompson, H.	"	2 99	
Bedard, S.	"	98 53	
Weiss, G.	"	3 55	
			$53,556 90

Telegraph and Telephone Department.

Kelly, W. J.	S. T. and T.	$2,020 00	
Brown, C. A.	Clerk	640 00	
Ferguson, L. M.	Inspector	683 33	
Picard, P.	Lineman	1,107 47	
Imbeault, E.	"	69 43	
Lynch, W.	"	22 00	
			$4,542 23

Commercial Telegraph and Telephone Offices.

Cobalt.

Bunyan, Miss M.	Operator	$932 25	
Hann, R. C.	"	176 36	
Goldforbe, J.	"	53 47	
Asseltine, Miss G.	"	76 13	
Guertin, Miss F. M.	"	779 89	
Chessar, A.	"	25 00	
Donaldson, W.	Messenger	42	
Simpkins, W.	"	90 00	
Simpkins, J. H.	"	55 00	
Burry, J.	"	175 00	
O'Brien, M. L.	Accountant	81 79	
			$2,445 31

Elk Lake and Gowganda.

Tremblay, Miss E.	Operator	$197 17	
Craig, W. H.	"	205 00	
Craig, Miss M.	"	40 00	
Stubinski, Miss J.	"	222 83	
Sullivan, M. J.	Lineman	1,054 20	
			$1,719 20

Cochrane.

Shane, J. W.	Operator	$97 06	
Bunyan, Miss M.	"	74 67	
Burdock, H. G.	"	17 42	
Hann, R. C.	"	871 62	
Cole, W. C.	"	52 26	
Schultz, J. B.	"	18 19	
Brown, T. W.	"	416 67	

Cochrane.—Continued.

Munns, Miss I.	Clerk	8 33	
Hogan, Miss D. M.	"	670 00	
Jamieson, Miss E.	"	21 19	
Waldron, W.	Messenger	358 06	
			$2,605 47

Linemen and Extra Gang.

McLellan, J.	Lineman	$1,132 70	
Loisel, S.	"	1,167 92	
Imbeault, E.	"	353 71	
Toupin, P.	"	554 44	
McInnis, J.	"	106 92	
Other Linemen, Laborers, etc.		2,111 52	
			$5,427 21

Office of Chief Engineer and Superintendent of Maintenance.

Clement, S. B.	C. E. and S. M.	$4,140 00	
Dickson, G. H.	C. Draughtsman	1,880 00	
Burt, T. K.	Draughtsman	672 00	
McRoberts, A. A.	"	470 00	
Johnston, W. I.	C. Clerk	1,610 00	
Young, J.	Clerk	990 00	
McIntosh, R. M.	"	900 00	
O'Donnell, J. A.	"	60 00	
Morgan, Miss N. L.	Stenographer	740 00	
Lemieux, Miss G. E.	"	133 06	
Simpson, Miss D. W.	"	358 74	
Imeson, W. C.	"	11 00	
Martin, Miss A. H.	"	395 65	
Palmer, Miss M.	"	95 48	
Griffiths, Miss E.	"	24 84	
Armstrong, T.	Office boy	237 10	
			$12,717 87

Greenhouse, Englehart.

Kerrigan, D.	Gardener	$840 00	
Ward, W.	"	720 00	
Garovitch, M.	Teaming	222 20	
Preston, B.	"	2 50	
Simpkins, A.	"	19 50	
Beaupre, W.	"	8 00	
Clark, A.	"	63 00	
Shellswell, J.	"	21 60	
Marchand, D.	"	8 40	
Simpkins, P.	Laborer	312 25	
Gray, W.	"	2 70	
Jarvie, E.	"	2 70	
Fulford, A.	"	16 00	
Phillips, W.	"	348 37	
Cannon, W.	"	294 57	
Cannon, H. A.	"	174 99	
Byerlay, G.	"	321 00	
Simpkins, A.	"	177 25	
Hounslow, F.	"	13 05	
			$3,568 08

Office of Master Mechanic.

Ross, T. R.	M. Mechanic	$2,380 00
Douglass, J. J.	Rd. Foreman	1,880 00
Rodgers, H. L.	Mechanical Engineer	1,760 00
Battley, C. A.	A. B. Inspector	1,640 00
McMillan, W.	Travelling Inspector	670 00

Office of Master Mechanic.Continued.

Earle, G.	Chief Electrician	790 00	
McRoberts, A. A.	Draughtsman	845 00	
Ellwood, R. E.	Chief Clerk	1,230 00	
Raymond, J. C.	Clerk	777 50	
Lye, A. L.	"	143 95	
Corbeil, I.	"	450 00	
Corbeil, A. J.	"	238 71	
Lidkea, H.	"	419 35	
Leppan, S. R.	"	320 00	
Rousseau, E. J.	Stenographer	96 77	
Elston, E.	"	394 04	
Lehman, E.	"	261 03	
McLaren, G.	"	5 55	
Greene, E. S.	Clerk	95 16	
			$14,397 06

Motive Power Department, North Bay.

Black, W. J.	Foreman	$1,740 00	
Machinists		22,737 72	
Carpenters		2,043 03	
Painters		2,407 93	
Other shopmen		73,738 77	
			$102,667 45

Car Department, North Bay.

Beath, J.	Foreman	$1,360 00	
Carpenters		5,925 45	
Other employees		28,219 89	
			$35,505 34

Carpenter Shop, North Bay.

Williamson, R.	Foreman	$1,580 00	
Carpenters		14,184 51	
Painters		9,212 75	
Other shopmen		20,758 10	
			$45,735 36

Motive Power and Car Department, Cobalt.

Sibbold, T.	Inspector	$1,236 91	$1,236 91

Motive Power and Car Department, Elk Lake.

Other shopmen		$2,068 57	$2,068 57

Motive Power and Car Department, Englehart.

Clarke, R.	Foreman	$1,620 00	
Machinists		4,889 08	
Carpenters		18 02	
Painters		51 92	
Other shopmen		26,299 74	
			$32,878 76

Motive Power and Car Department, Iroquois Falls.

Other shopmen		$3,613 22	$3,613 22

Motive Power and Car Department, Timmins.

Thompson, E.	Foreman	$1,300 00	
Machinists		21 14	
Other shopmen		10,252 74	
			$11,573 88

Motive Power and Car Department, Cochrane.

Moth, A. T.	Foreman	$1,360 00	
Machinists		1,609 92	
Carpenters		54 07	
Other shopmen		19,508 88	
			$22,532 87

Resident Engineer, Locating Engineer and Assistants.

Boast, R. G.	Resident Engineer	$1,730 00	
Maher, W. R.	Locating Engineer	1,940 00	
Watson, C. G.	Draughtsman	1,170 00	
Sinton, J.	Inst. man	170 00	
Fraser, A. A.	"	1,150 00	
O'Donnell, J. A.	"	552 74	
Flannery, W.	Rodman	216 00	
Hill, L.	"	32 00	
Sharpe, H. W.	"	26 66	
O'Hare, J.	Chainman	22 50	
O'Connor, J.	"	88 00	
Coleman, E.	"	52 00	
Childs, J.	"	65 00	
Montemurro, S.	"	8 00	
Montemurro, M.	"	124 00	
Bulger, C.	"	40 00	
Latour, F.	Axeman	38 00	
Beaton, W.	"	38 00	
Lynch, T.	"	105 50	
Peterson, W.	"	38 00	
O'Connor, J.	Estimator	179 94	
Bernard, P.	"	185 10	
McLeod, J.	Guide	24 00	
West, C.	Cook	28 50	
Martin, H.	Inspector	563 23	
			$8,587 17

Office of B. & B. Master.

Oldham, W. J.	B. & B. M.	$1,940 00	
Stafford, E. J.	Clerk	1,050 00	
			$2,990 00

Water Service.

Day, H. J.	Inspector	$1,209 00	
Pumpmen, etc.		10,305 82	
			$11,514 82

B. & B. Dept., Extra Gangs.

Carpenters		$41,615 92	
Others		33,656 58	
			$75,272 50

Roadmasters.

Young, W.	Roadmaster	$1,980 00	
Faught, S. J.	"	756 16	
Drinkwater, J.	"	1,805 00	
Edwards, A.	"	1,256 61	
Comrie, W.	"	369 06	
Switzer, W.	"	466 97	
			$6,633 80

Track Section Gangs.

Section No.	1	Foreman		$1,255 35	
		Laborers		8,133 99	9,389 34
"	2	Foreman		1,029 31	
		Laborers		2,441 58	3,470 89
"	3	Foreman		1,036 22	
		Laborers		2,357 80	3,394 02
"	4	Foreman		996 96	
		Laborers		1,707 45	2,704 41
"	5	Foreman		1,084 12	
		Laborers		1,857 91	2,942 03
"	6	Foreman		1,061 41	
		Laborers		1,805 52	2,866 93
"	7	Foreman		1,029 69	
		Laborers		1,970 16	2,999 85
"	8	Foreman		973 55	
		Laborers		1,750 55	2,724 10
"	9	Foreman		1,066 11	
		Laborers		1,677 92	2,744 03
"	10	Foreman		1,068 12	
		Laborers		1,470 65	2,538 77
"	11	Foreman		1,095 61	
		Laborers		1,261 06	2,356 67
"	12	Foreman		999 45	
		Laborers		2,240 43	3,239 88
"	13	Foreman		1,032 00	
		Laborers		2,239 05	3,271 05
"	14	Foreman		1,095 31	
		Laborers		1,307 52	2,402 83
"	15	Foreman		889 52	
		Laborers		1,534 94	2,424 46
"	16	Foreman		995 67	
		Laborers		1,422 85	2,418 52
"	17	Foreman		1,033 25	
		Laborers		4,083 18	5,116 43
"	18	Foreman		1,061 50	
		Laborers		3,691 60	4,753 10
"	19	Foreman		1,161 50	
		Laborers		2,746 23	3,907 73
"	20	Foreman		1,020 26	
		Laborers		3,048 32	4,068 58
"	21	Foreman		1,090 47	
		Laborers		2,771 35	3,861 82
"	22	Foreman		1,055 72	
		Laborers		2,600 69	3,656 41
"	23	Foreman		1,473 91	
		Laborers		7,800 84	9,274 75
"	24	Foreman		1,007 22	
		Laborers		2,212 06	3,219 28
"	25	Foreman		1,012 77	
		Laborers		1,874 60	2,887 37
"	26	Foreman		1,133 70	
		Laborers		2,518 16	3,651 86
"	27	Foreman		1,077 00	
		Laborers		2,980 46	4,057 46
"	28	Foreman		1,057 03	
		Laborers		1,524 98	2,582 01
"	29	Foreman		1,043 50	
		Laborers		1,552 10	2,595 60
"	30	Foreman		1,036 49	
		Laborers		2,661 15	3,697 64
"	31	Foreman		1,020 30	
		Laborers		3,032 66	4,052 96
"	32	Foreman		1,102 25	
		Laborers		1,228 63	2,330 88
"	33	Foreman		1,076 15	
		Laborers		1,834 89	2,911 04

Track Section Gangs.—Continued.

Section No. 34	Foreman	1,055 69		
	Laborers	2,216 60	3,272 29	
" 35	Foreman	1,161 22		
	Laborers	2,189 00	3,350 22	
" 36	Foreman	990 52		
	Laborers	1,685 65	2,676 17	
" 37	Foreman	1,005 62		
	Laborers	2,082 02	3,087 64	
" 38	Foreman	1,106 77		
	Laborers	1,284 66	2,391 43	
" 39	Foreman	2,146 62		
	Laborers	8,762 30	10,908 92	
" 40	Foreman	1,014 00		
	Laborers	2,295 08	3,309 08	
" 41	Foreman	973 54		
	Laborers	1,541 53	2,515 07	
" 42	Foreman	988 74		
	Laborers	2,193 86	3,182 60	
" 43	Foreman	1,010 71		
	Laborers	1,805 42	2,816 13	
" 44	Foreman	1,008 91		
	Laborers	2,771 28	3,780 19	
" 45	Foreman	1,161 13		
	Laborers	3,003 78	4,164 91	
" 46	Foreman	1,138 77		
	Laborers	3,240 02	4,378 79	
" 47	Foreman	1,031 02		
	Laborers	1,748 23	2,779 25	
" 48	Foreman	1,010 53		
	Laborers	1,404 96	2,415 49	
" 49	Foreman	1,030 84		
	Laborers	2,542 53	3,573 37	
" 50	Foreman	1,182 96		
	Laborers	1,787 86	2,970 82	

Extra Gangs, Road Department.

Extra Gang No. 1	Foreman	$1,941 87		
	Laborers	10,672 22	12,614 09	
" 2	Foreman	614 81		
	Laborers	855 32	1,470 13	
" 3	Foreman	1,012 26		
	Laborers	9,477 58	10,489 84	
" 4	Foreman	280 39		
	Laborers	2,602 51	2,882 90	
" 5	Foreman	859 79		
	Laborers	4,341 14	5,200 93	
" 6	Foreman	1,396 96		
	Laborers	4,473 26	5,870 22	
" 7	Foreman	356 74		
	Laborers	1,561 40	1,918 14	
" 8	Foreman	1,345 63		
	Laborers	8,297 65	9,643 28	
" 9	Foreman	1,190 13		
	Laborers	9,409 24	10,599 37	
" 10	Foreman	972 95		
	Laborers	4,456 21	5,429 16	
" 11	Foreman	430 66		
	Laborers	685 67	1,116 33	
" 12	Foreman	154 03		
	Laborers	457 79	611 82	
" 13	Foreman	943 72		
	Laborers	4,565 51	5,509 23	
" 14	Foreman	92 34		
	Laborers	637 71	730 05	

Special Pay Roll—Donations to Employees Enlisted for Overseas Service.

Ryan, S. H.	Trainmaster	$517 50	
McAusland, J.	Clerk	86 25	
Pike, F.	Checker	195 00	
Dugard, W. J.	"	195 00	
Brigginshaw, W.	Trucker	175 50	
Spearitt, W.	Cooper	31 00	
Bell, R.	Checker	30 00	
Brown, R. M.	Baggageman	27 50	
Harris, J. B.	S. Foreman	130 00	
Duffett, I. S.	Baggageman	187 50	
Mortson, N. E.	Clerk	27 50	
Wallace, F.	Brakeman	283 53	
Clark, C.	"	202 12	
Shepherd, E. C.	"	124 19	
McMillan, R. J.	"	44 09	
McAughey, T. J.	"	107 31	
Gatacre, G. W.	"	55 87	
Currie, N.	Engineer	213 28	
Connell, W. D.	"	304 38	
Cadden, C. A.	Machinist	154 19	
Forder, R.	Inspector	189 64	
Webster, J.	Carpenter	37 94	
Tipler, H.	"	172 03	
Jensen, M.	Trimmer	161 07	
Wallace, F. J.	Cleaner	84 83	
Antram, W. H.	"	25 30	
Aubert, R. A.	Stationary Engineer	80 38	
Grieve, A.	Helper	55 74	
Tibbles, A. H.	Bridgeman	136 80	
Papciak, H.	Sectionman	24 95	
Hockae, M.	"	52 82	
			$4,113 21
Total pay roll			$1,273,967 54

TEMISKAMING AND NORTHERN ONTARIO RAILWAY.

EXPENDITURE FOR FISCAL YEAR, 1917.

ALGOMA STEEL CORPORATION, LIMITED, SAULT STE. MARIE, ONT.

63547—Rails	$6,985 18	
63871— "	13,155 47	
68754— "	17,145 45	
		$37,286 10

ALLEN MANUFACTURING COMPANY, LIMITED, TORONTO, ONT.

63549—Laundry	$16 31	
63647— "	5 28	
64118— "	13 61	
64290— "	13 49	
65342— "	5 41	
67047— "	13 11	
67924— "	4 80	
68213— "	22 21	
69119— "	2 91	
69177— "	12 27	
69906— "	13 34	
69970— "	4 22	
70537— "	4 11	
70630— "	8 37	
70850— "	22 63	
		$162 07

ATCHISON, TOPEKA & SANTA FE RAILWAY, TOPEKA, KANSAS.

63693—Claim	$3 26	
64369a—Car service balance	53 10	
64583—Car repairs	4 17	
64162— " "	18 55	
64994— " "	1 59	
65090—Car service balance	43 65	
65847— " " "	47 10	
65907—Car repairs	27 22	
65973—Ticket balance	109 65	
65656—Car destroyed in fire of July, 1916	277 92	
65914—Claims	8 29	
66260—Car service balance	112 10	
66456—Car repairs	13 27	
66749— " "	6 74	
67263—Car service balance	17 70	
66838—Claim	4 64	
67898—Car repairs	25 65	
68385— " "	303 20	
68813—Car service balance	52 50	
68716—Car repairs	3 86	
69148—Car service balance	4 80	
69655—Car repairs	5 76	
69783—Car service balance	29 40	
70322—Car repairs	3 11	
70350—Car service balance	1 80	
70498—Ticket balance	27 46	
70917—Car service balance	24 45	
71291—Claim	4 86	
71424—Claims	3 84	
71626—Car repairs	17 33	
		$1,256 97

ABITIBI POWER & PAPER COMPANY, LIMITED, IROQUOIS FALLS, ONT.

63765—Claims	$7 30	
64303— "	82 66	
64551— "	11	
64792— "	167 05	
64842— "	7 26	
65151— "	32 84	
65209— "	88 34	
65617— "	127 23	
65676— "	155 56	
65912— "	3 07	
65938—Soft coal	97 18	
66086—Claims	21 96	
66524— "	17 42	
66229—Brake bumpers	23 56	
67001—Claims	115 93	
67316— "	18 88	
67640— "	23 70	
67935— "	694 58	
68585— "	30 88	
68402— "	7 00	
68784— "	6 40	
68770—Coal	15 00	
69121—Claims	42 45	
69481— "	531 74	
70026— "	60 92	
70130— "	27 88	
70671—Coal	72 00	
71227—Claims	27 02	
70658— "	473 93	
70944— "	14 00	
71016—Lighting station and house	13 00	
71410—Claims	18 40	
		$3,025 25

ADAMS & WESTLAKE COMPANY, CHICAGO, ILL.

63791—Locks and keys, etc.	$71 86	
64408—Brake shafts, etc.	137 66	
65395—Brass, cup, hooks	2 16	
65940—Tail gates	68 40	
66825—Locks and keys, etc.	138 56	
67119—Door holders	45 60	
68386—Washers, etc.	52 07	
68988—Hooks	19 20	
69754—Guides	24 00	
70924—Plumbing, fittings, etc.	191 00	
71276—Locks, etc.	14 40	
		$764 91

THE ADVERTISER JOB PRINTING COMPANY, LONDON, ONT.

63793—Stationery supplies	$10 85	
65269— " "	10 00	
65936— " "	5 75	
68527— " "	23 43	
68886— " "	29 25	
69547— " "	12 65	
69752— " "	4 75	
		$96 68

AIKENHEAD HARDWARE, LTD., TORONTO, ONT.

63795—Butts	$48 00	
69599—Pipe cutter	1 42	
		$49 42

THE ALEXANDER & CABLE LITHOGRAPHING CO., LTD., TORONTO, ONT.

63869—Passes	$13 00	
68750—Vouchers	102 00	
69117—Letterheads	16 50	
70710— "	45 50	
		$177 00

ARIZONA EASTERN RAILROAD CO., TUCSON, ARIZ.

64349—Ticket balance	$90 00	
65274— " "	7 72	
66272—Car service balance	8 25	
70362— " " "	5 50	
		$111 47

ARMOUR CAR LINES, CHICAGO, ILL.

64371—Car service balance	$11 32	
65092— " " "	22 02	
65851— " " "	77	
66264— " " "	63	
67654— " " "	3 79	
		$38 53

AMERICAN REFRIGERATOR TRANSIT COMPANY, ST. LOUIS, MO.

64373—Car service balance	$3 87	
66266— " " "	14 56	
67267— " " "	2 35	
67656— " " "	6 52	
69152— " " "	1 69	
69785— " " "	1 99	
70352— " " "	3 87	
70919— " " "	5 41	
		$40 26

ATLANTIC COAST LINE RAILROAD, WILMINGTON, N.C.

64375—Car service balance	$30 60	
64585—Car repairs	1 44	
64164— " "	1 32	
64998— " "	2 03	
65382—Car service balance	31 50	
65853— " " "	59 40	
66268— " " "	18 75	
66606—Car repairs	3 40	
66903—Tariff	51	
67074—Car repairs	4 21	
68133— " "	8 67	
68631—Car service balance	7 50	
68476—Car repairs	1 21	
69154—Car service balance	30 90	
68967—Car repairs	1 97	
69787—Car service balance	12 15	
70086—Car repairs	8 92	
70354—Car service balance	55 65	
70921— " " "	6 60	
71081—Car repairs	2 45	
70828— " "	5 03	
71446—Car service balance	23 40	
		$317 61

ROSS ARCHER, COBALT, ONT.

64555—Repairs to clock	$1 50	
64869— " "	1 50	
66349— " "	1 50	
		$4 50

THE ART METROPOLE, TORONTO, ONT.

63966—Stationery supplies	$ 28	
65267— " "	23 64	
67131— " "	19 65	
68320— " "	48 39	
68984— " "	29 43	
69241— " "	5 63	
69549— " "	2 40	
69597— " "	3 32	
69770— " "	7 55	
70675— " "	10 20	
71028— " "	11 29	
		$161 78

THE AMERICAN RAILWAY ASSOCIATION, NEW YORK, N.Y.

64120—Copies of proceedings	$4 00	
64805—Assessment	36 18	
65541—Car service rules	85	
65522—Assessment	52 41	
67548—Assessment	52 38	
68297—Copy of rule book	2 50	
68208—Copy of rule book	2 50	
69424—Assessment	52 32	
70315—Assessment	52 32	
		$255 46

AMERICAN RAILWAY ENGINEERING ASSOCIATION, CHICAGO, ILL.

64122—Subscriptions and dues	$10 50	
		$10 50

ALGOMA CENTRAL & HUDSON BAY RAILWAY COMPANY, SAULT STE. MARIE, ONT.

64160—Car repairs	$64 14	
64996—Car repairs	5 90	
65298—Cars destroyed by fires of July, 1916	846 10	
65849—Car service balance	90 15	
65658—Cars destroyed by fires of July, 1916	134 76	
66262—Car service balance	82 95	
67265— " "	18 75	
67652— " "	53 50	
67800—Car repairs	18 95	
68629—Car service balance	15 75	
68210—Car repairs	2 70	
69150—Car service balance	34 05	
69809—Car service balance	2 40	
71313—Interline freight balance	140 92	
		$1,511 02

HELEN ASTELS, GILLIES DEPOT, ONT.

64288—Award, W. C. B., *re* injuries alleged, I. J. Astels (deceased)	$20 00	
64665— " " " " " "	20 00	
65396— " " " " " "	20 00	
66177— " " " " " "	20 00	
66648— " " " " " "	20 00	
67629— " " " " " "	20 00	
67954— " " " " " "	20 00	
68845— " " " " " "	20 00	
69344— " " " " " "	20 00	
70079— " " " " " "	20 00	
70550— " " " " " "	20 00	
		$220 00

AMERICAN ARCH COMPANY, NEW YORK, N.Y.

64406—Fire brick	$32 00	
65934— "	37 00	
67098— "	33 00	
69756— "	129 80	
		$231 80

ASSOCIATION OF TRANSPORTATION & CAR ACCOUNTING OFFICERS, NEW YORK, N.Y.

64892—Annual dues	$7 57	
68274—Annual dues	13 78	
		$21 35

ATLANTA, BIRMINGHAM & ATLANTIC RAILWAY CO., ATLANTA, GA.

65094—Car service balance	$4 50	
65855— " "	11 25	
66270— " "	8 25	
67269— " "	38 10	
67658— " "	3 75	
69156— " "	4 80	
70356— " "	7 20	
70923— " "	6 00	
69789— " "	1 80	
		$85 65

THE ALGOMA EASTERN RAILWAY COMPANY, SAULT STE. MARIE, ONT.

65296—Value of A. E. car, No. 2318, destroyed	$1,030 09	
70360—Car service balance	1 20	
		$1,031 29

ASSOCIATION OF AMERICAN RAILWAY ACCOUNTING OFFICERS, WASHINGTON, D.C.

64741—Special assessments	$9 90	
67949—Annual dues	14 00	
		$23 90

ABRAHAM & ABOUD, HAILEYBURY, ONT.

64949—Claim No. 13535—Loss two shirts	$2 00	
67851—Claim No. 13014—Loss clothing	50 25	
		$52 25

A. E. ADSHEAD, HAILEYBURY, ONT.

65211—Claim No. 13432—Damage to catsup	$3 60	
68836—Claim No. 14859—Loss raisins	2 73	
		$6 33

ASSOCIATED GOLDFIELDS CO., LIMITED, TORONTO, ONT.

65221—Claim No. 13689—Overcharge rate, machinery	$2 22	
		$2 22

M. A. ATTALLAH, MATHESON, ONT.

65725—Claim No. 13132—Loss oats	$3 43	
65619—Claim No. 13131—Damage to sash	1 60	
68704—Donation *re* horse killed	50 00	
70603—Claim No. 15499—Loss confectionery	2 03	
71229—Claim No. 16252—rebate on material	48 62	
		$105 68

ANN ARBOR RAILROAD COMPANY, TOLEDO, OHIO.

65793—Car repairs	$22 36	
66604— "	5 83	
66707— "	7 41	
67922— "	8 18	
69656— "	12 79	
70358—Car service balance	4 20	
71083—Car service balance	7 45	
		$68 22

A. ABRAMSON, IROQUOIS FALLS, ONT.

65674—Claim No. 11684—Damage to tobacco	$ 55	
68383—Claim No. 14104—Loss confectionery	1 72	
		$2 27

AURORA METAL COMPANY, INC., AURORA, ILL.

65880—Rod packing, etc.	$39 00	
68054—Piston packing	29 40	
70235—Rod packing	32 67	
		$101 07

ANCHOR PACKING COMPANY OF CANADA, LIMITED, MONTREAL, QUE.

65882—Asbestos spool and metallic coil	$4 05	
65932—Packing	25 43	
68986—Coil	4 84	
		$34 32

THE AMERICAN NOVELTY COMPANY, NORTH BAY, ONT.

66472—Advertising	$1 32	
67398—Advertising	17 64	
		$18 96

ALEXO MINING COMPANY, LIMITED, PORQUIS JUNCTION, ONT.

66439—Claim No. 12839—Loss potatoes	$5 20	
		$5 20

ASSOCIATED GOLDFIELDS MINING COMPANY, LTD., TORONTO, ONT.

66845—Claim No. 14221—Overcharge on horses	$3 50	
		$3 50

H. ADDISON, THORNLOE, ONT.

66863—Claim No. 13557—Loss box toe caulks	$2 00	
		$2 00

A. ANSARA, COBALT, ONT.

67243—Claim No. 14069, damage to picture frame	$ 25	
		$ 25

E. M. ALLWORTH, TIMMINS, ONT.

66816—Contract wiring section house, freight shed and tenement houses, Iroquois Falls	$463 25	
68982—Contract wiring section house, freight shed and tenement houses, Iroquois Falls	97 61	
69384—Refund, deposit on contract	30 50	
69386—Refund, deposit on contract	24 00	
70926—Contract wiring and installing electrical fixtures, freight shed, Timmins, and agent's house and station, Monteith	255 75	
		$871 11

JAMES ANDREWS, ENGLEHART, ONT.

66944—Expenses	$1 25	
		$1 25

AMERICAN FORESTRY, BOSTON, MASS.

67088—White pine seed	$4 36	
		$4 36

ALABAMA & VICKSBURG RAILWAY, NEW ORLEANS, LA.

67660—Car service balance	$13 50	
69126— " "	6 45	
69793— " "	6 60	
69968— " "	24 90	
70320—Car repairs	1 75	
70925—Car service balance	4 80	
71448— " "	60	
		$58 60

ARMS PALACE HORSE CAR CO., CHICAGO, ILL.

67662—Car service balance	3 79	
		$3 79

MRS. JAMES ASTELS, NORTH COBALT, ONT.

67655—Donation *re* alleged injuries, I. C. Astels	$5 00	
67956— " " " "	5 00	
68843— " " " "	5 00	
69346— " " " "	5 00	
70077— " " " "	5 00	
70552— " " " "	5 00	
		$30 00

AMERICAN HOIST & DERRICK COMPANY, ST. PAUL, MINN.

68073—Shaft pinions	$79 75	
		$79 75

AMERICAN RAILWAY MASTER MECHANICS' ASSOC., CHICAGO, ILL.

68305—Annual dues	$5 00	
		$5 00

MIZAEL ALLARD, PEMBROKE, ONT.

68579—Claim No. 14933, damage to trunks	$8 50	
		$8 50

AKRON, CANTON & YOUNGSTOWN RAILWAY, AKRON, O.

69791—Car service balance	$ 30	
		$ 30

A. ASSAD, SCHUMACHER, ONT.

69562—Claim No. 14628, loss oranges	$4 03	
70419—Claim No. 15633, loss syrup	1 17	
		$5 20

THE ANNUAL REVIEW PUBLISHING CO., LIMITED, TORONTO, ONT.

70128—Publication	$5 50	
		$5 50

ALLIED TRADES & LABOR ASSOCIATION, TORONTO, ONT.

70229—Advertising	$25 00	
		$25 00

ADVANCE PUMP & COMPRESSOR COMPANY, BATTLE CREEK, MICH.

70479—Chest cover	$76 90	
		$76 90

ATLANTA & WEST RAILROAD COMPANY, ATLANTA, GA.

70639—Car repairs	$1 05	
		$1 05

THE AIR BRAKE ASSOCIATION, NEW YORK, N.Y.

70673—Annual proceedings	$2 00	
		$2 00

J. AIELLO, NORTH BAY, ONT.

70900—Expenses	$12 00	
		$12 00

N. ABRAMSON, ENGLEHART, ONT.

71404—Award W. C. B. *re* alleged injuries	$25 35	
		$25 35

D. ALASSIKY, COCHRANE, ONT.

71614—Unclaimed wages	$17 84	
		$17 84

ALEXANDRIA & WESTERN RAILWAY CO., GARDEN CITY, LA.

71628—Car repairs	$3 13	
		$3 13

BUNTIN, GILLIES & COMPANY, LIMITED, HAMILTON, ONT.

63325—Stationery supplies	$71 79	
63379— " "	64 48	
63910— " "	146 76	
64914— " "	167 58	
64807— " "	7 89	
64901— " "	17 99	
65460— " "	205 58	
66279— " "	56 99	
66495— " "	53 69	
66702— " "	98 51	
67250— " "	53 98	
67677— " "	62 05	
67711— " "	47 12	
68050— " "	257 37	
68901— " "	185 07	
69409— " "	32 34	
69446— " "	61 66	
69480— " "	3 18	
70239— " "	41 20	
70535— " "	28 32	
71258— " "	3 18	
		$1,666 73

THE BELL TELEPHONE COMPANY OF CANADA.

63363—Toll service	$8 30
64041—Telephone interchange balance and toll service	125 42
64172—Toll service and exchange service	6 87
64292—Exchange service	15 25
64376— " " and toll service	46 60
64520— " "	9 25
64894—Telephone interchange balance, toll service and exchange.	164 38

THE BELL TELEPHONE COMPANY OF CANADA.—*Continued.*

64916—Exchange service	10 25
65056— " " and toll service	18 65
64703— " "	16 75
64799— " "	47 74
64951—Claim No. 12235, overcharge weight poles	63 33
65161—Toll service	5 30
65545—Telephone interchange balance	159 85
65637—Exchange service	29 95
65480—Exchange service and toll service	20 80
65596—Exchange service	3 10
65886—Toll service	1 25
65888— "	49 20
66006— " and exchange service	12 30
66476— "	14 30
66564—Telephone interchange balance	95 21
66647—Exchange service	9 25
66709— " " and toll service	102 30
66763— " " "	93 44
66769— " "	1 37
66969—Telephone interchange balance	175 30
67545—Exchange and toll service	12 25
66774— " "	32 40
66982—Toll service	11 60
66984— "	20 60
67150— "	13 00
67452—Exchange and toll service, telephone interchange balance	146 76
68171—Toll and messenger service	20 50
68329—Telephone interchange balance	123 05
68398—Toll service	3 21
68802—Telephone interchange balance	89 12
68758—Exchange and toll service	44 80
68726— " "	22 15
68860— " "	52 99
68866— " "	11 75
69048— " "	13 50
68871— " "	7 05
68973— " "	13 85
69075— " "	12 65
69123— " "	6 85
69411— " "	29 75
69551— " "	2 90
69753—Telephone interchange balance	76 61
69428—Exchange and toll service	5 00
69532— " "	11 60
69628— " "	25
70058— " "	2 45
70176—Telephone interchange balance	58 22
70190—Exchange and toll service	15 80
70226—Toll and exchange service	27 50
70301— " " "	59 10
70347—Toll service	4 90
70549—Exchange and toll service	43 45
70817—Telephone interchange balance	48 84
71215—Toll service	2 50
70608—Exchange service	10 25
70614—Exchange service and toll service	23 75
70708— " " "	63 17
70754— " " "	17 59
70730—Toll and messenger service	14 70
70770—Toll service	18 15
71180—Exchange service and toll service	39 32
71602—Telephone interchange balance	27 31
	$2,566 90

THE BEARDMORE BELTING COMPANY, LIMITED, TORONTO, ONT.

63365—Belting	$95 02	
63653— "	59 75	
64410—Belt laces	8 10	
64687—Belting	97 98	
64713—Leather	25 14	
64787—Belting	54 07	
66233— "	83 19	
68081—Laces	36 25	
69476—Belting	47 88	
69774—Leather	12 60	
70690—Belting	23 24	
		$543 22

BRANTFORD ROOFING COMPANY, LIMITED, BRANTFORD, ONT.

63375—Roofing	$84 91	
63635— "	20 22	
63805— "	283 25	
64004— "	24 10	
65896— "	76 66	
68368— "	6 17	
70237— "	85 26	
70377— "	69 82	
		$650 39

BURROW, STEWART & MILNE COMPANY, LIMITED, HAMILTON, ONT.

63433—Scale cards	$10 15	
63807—Truck	60 00	
65488—Platform scale	48 26	
66882—Scale	51 21	
67448—Repairing platform scale	9 93	
69605—Wheels for truck	5 40	
70379—Platform scale	60 07	
70481—Trucks	160 00	
		$405 02

A. BRAZEAU, TIMMINS, ONT.

63449—Heating and plumbing, Timmins station	$1,422 05	
65785—Installation of steam heating, Timmins station	1,024 63	
66042—Claim No. 12906, overcharge on radiators	52 59	
69437—Claim No. 13496, damage to earthenware	7 10	
70624—Installation of hot air heating system, agent's house, Connaught	200 00	
70648—Refund deposit on contract	10 00	
70946—Claim No. 15532, loss china tank	6 70	
71204—Claim No. 15832, damage to tank covers	7 04	
		$2,730 11

BANNER & OSTROM, NORTH BAY, ONT.

63463—Groceries	$38 04	
63797— "	13 58	
63968— "	11 31	
65597— "	24 35	
65972— "	12 09	
67035— "	45	
68609— "	15 50	
69772— "	17 15	
69908— "	61 35	
71165— "	66 31	
71604— "	8 23	
		$268 36

THE BANK OF OTTAWA.

63551—Exchange charges, etc.	$8 31	
63649—Returned draft	1 35	
63651— " "	159 84	
64092—Exchange charges	25 33	
64414—Returned drafts	8 10	
64522— " "	11 20	
65077— " "	19 63	
65079—Exchange charges	17 28	
65478—Returned draft	5 70	
65524— "	14 08	
65534— "	55 60	
65570—Exchange charges	84 21	
65576—Interest on overdraft	1,726 43	
65850—Returned draft	364 40	
66493—Exchange charges	60 39	
66659—Returned draft	3 00	
66711— " "	6 75	
66771— " "	719 16	
67323—Exchange charges	33 00	
66860— " "	196 46	
66934—Returned draft	3 15	
66946— " "	6 75	
67284— " "	1 50	
67286— " "	75	
67989—Exchange charges	21 73	
67991—Interest on overdraft	1,983 15	
68051—Exchange charges	85 10	
67960—Deductions from Toronto staff pay rolls *re* war bonds	53 75	
68690—Exchange charges	3 60	
68688—Returned drafts	7 50	
68130—Exchange charges	5 23	
68823—Deductions from Toronto staff pay rolls re war bonds	49 45	
68827— " " " "	12 90	
68879—Returned drafts	3 50	
69063— " "	3 58	
69065—Exchange charges	8 13	
69227— " "	3 62	
69775—Returned drafts	17 40	
69835— " "	10 05	
70027— " "	1 35	
70039— " "	476 41	
70047— " "	53 86	
70065— " "	1 80	
69342—Deductions from Toronto staff pay rolls re war bonds	49 45	
69362— " " " "	12 90	
69622—Interest on overdraft	2,146 10	
69648—Refund protested cheque	800 00	
69766—Returned drafts	1 80	
69966— " "	9 30	
69984—Exchange charges	6 36	
70097—Deductions from Toronto staff pay rolls *re* war bonds	14 10	
70211— " " " "	49 45	
70523—Exchange charges	1 72	
70531—Returned drafts	44 10	
70795— " "	21 30	
70799— " "	108 22	
70865— " "	27 95	
71193— " "	2 60	
70548—Deductions from Toronto staff pay rolls *re* war bonds	54 05	
70572— " " " "	12 90	
70712—Returned drafts	2 60	
70766— " "	2 90	
		9,702 28

J. R. Booth, Ottawa, Ont.

63583—Refund deposit on siding	100 85	
68377—Claims Nos. 14496 and 14497, loss jam and steel	17 11	
		117 96

Benjamin Electric Manufacturing Co. of Canada, Ltd., Toronto, Ont.

63597—Electrical fixtures	2 44	
63801— " "	17 60	
65462— " "	52 88	
66231— " "	19 29	
70485— " "	8 91	
		101 12

Chas. Battley, North Bay, Ont.

63601—Travelling expenses	$2 75	
64166— " "	1 75	
65556— " "	15 45	
66884— " "	3 25	
68878— " "	3 50	
70449— " "	1 25	
		$27 95

W. J. Bauldry, Cochrane, Ont.

63611—Travelling expenses	$10 40	
64090— " "	5 55	
65117— " "	9 45	
65730— " "	8 25	
66459— " "	19 85	
66888— " "	11 05	
67877— " "	6 65	
68376— " "	9 50	
69043— " "	8 30	
69632— " "	8 40	
70547— " "	8 90	
70992— " "	13 40	
		$119 70

Buffalo & Susquehanna Coal & Coke Co., Buffalo, N.Y.

63675—Coal	$2,713 26
64632— "	2,908 15
64989— "	2,029 14
65397— "	2,230 44
65639— "	2,100 36
66002— "	3,361 18
66761— "	5,065 47
66953— "	3,575 20
66961— "	4,076 60
67029— "	7,398 74
67031— "	4,736 83
66776— "	669 30
67104— "	3,046 44
67148— "	2,799 27
67446— "	3,105 49
67512— "	2,468 04
68017— "	3,838 35
68778— "	3,716 84
68740— "	3,914 20
68728— "	1,148 16
69407— "	2,479 68
69553— "	2,600 27
69657— "	3,041 80
69755— "	3,347 74
69607— "	6,238 31

BUFFALO & SUSQUEHANNA COAL & COKE CO., BUFFALO, N.Y.—*Continued.*

69957—Coal	$7,068 76	
69426— "	8,129 55	
69482— "	3,567 13	
69530— "	7,835 33	
69972— "	6,669 05	
70219— "	3,872 06	
70273— "	3,866 95	
70333— "	4,018 00	
70447— "	4,818 75	
71163— "	374 26	
70612— "	7,765 75	
70646— "	3,927 32	
70732— "	5,683 36	
70734— "	4,157 12	
70768— "	6,072 73	
71184— "	1,890 59	
		$162,325 97

C. F. BROWN, NORTH BAY, ONT.

63679—Travelling expenses	$3 45	
		$3 45

T. BINGHAM, NORTH BAY, ONT.

63681—Travelling expenses	$8 40	
		$8 40

D. C. BURKHOLDER, NEW LISKEARD, ONT.

63695—Claim No. 12078, shortage soft drinks	$2 00	
		$2 00

J. & A. BOOKALAM, COBALT, ONT.

63767—Claim No. 12836, loss one pair rubbers	$1 80	
64798— " 13285, damage to satchels	1 05	
		$2 85

BEGG BROTHERS, NORTH BAY, ONT.

63799—Dry goods	$58 07	
64412— " "	5 73	
65271— " "	27 66	
65399— " "	60	
67253— " "	47 59	
67133— " "	36 50	
67102— " "	18 22	
67450— " "	3 00	
68340— " "	45	
68990— " "	20 47	
69243— " "	11 49	
69603— " "	2 50	
69776— " "	2 55	
70483— " "	7 20	
71050— " "	6 38	
71282— " "	15 64	
		$264 05

JOHN BOURKE & CO., NORTH BAY, ONT.

63803—Paristone, lime, etc.	$41 80	
67077—Corner bead	2 00	
67100—Pitch	25 40	
67833—Paristone, etc.	152 05	
68077—Pitch	8 70	
68338—Lime	21 50	
69601— "	26 30	
		$277 75

BUSINESS SYSTEMS, LIMITED, TORONTO, ONT.

63809—Stationery supplies	$39 00	
63970— " "	20 60	
66939— " "	60	
68892— " "	23 50	
		$83 70

R. G. BOAST, NORTH BAY, ONT.

63851—Travelling expenses	$10 50	
64106— " "	4 85	
64885— " "	11 00	
66339— " "	4 50	
66846— " "	4 00	
67885— " "	7 60	
68108— " "	8 00	
68915— " "	12 00	
69474— " "	15 55	
70305— " "	14 30	
70844— " "	11 00	
		$103 30

J. BEATH, NORTH BAY, ONT.

63855—Travelling expenses	$14 90	
		$14 90

R. BUNYAN & CO., NORTH BAY, ONT.

63975—Hay	$125 34	
66441—Claim No. 13824, overcharge on hay	2 94	
67324— " 13748, overcharge on car of oats	8 00	
67811— " 14070, overcharge on car of hay	1 48	
68284—Seed	17 30	
		$155 06

MISS M. W. BUNYAN, COBALT, ONT.

64223—Expenses	$25 00	
		$25 00

D. A. BALFOUR & COMPANY, TORONTO, ONT.

64225—Carbon	$12 00	
64873— "	12 00	
65105— "	4 00	
66905— "	12 00	
67992— "	12 00	
68278— "	11 50	
69046— "	12 00	
70819— "	4 00	
71149— "	12 00	
70688— "	2 00	
		$93 50

C. BERNSTEIN, COCHRANE, ONT.

64243—Claims Nos. 12728 and 10684, overcharge on vegetables	$34 10	
64794—Claim No. 12845, loss, shortage chocolate	80	
64959— " 12843, loss, bag of onions	2 45	
66526— " 12729, overcharge on vegetables	12 00	
69129— " 14451, loss, chocolates	4 19	
71231— " 15323, loss, bananas	3 07	
71202— " 15963, overcharge on fruit	22 07	
		$78 68

M. Brownstein, Cobalt, Ont.

64307—Claim No. 12809, damage to fruit in transit	$59 82	
		$59 82

Buffalo Copper & Brass Rolling Mills, Buffalo, N.Y.

64309—Claim No. 13238, copper bands damaged by fire	$9,523 06	
		$9,523 06

Boston & Maine Railroad, Boston, Mass.

64351—Ticket balance	$3 88	
64168—Car repairs	2 57	
65795— " "	2 18	
65859—Car service balance	1 50	
65909—Car repairs	1 74	
65916—Claim	1 26	
65944—Car repairs	11 30	
66420—Ticket balance	6 40	
66513—Car destroyed by fire of July 29th, 1916	282 42	
66907—Car repairs	2 92	
67563— " "	42	
67320—Claim	144 45	
67900—Car repairs	7 34	
68639—Car service balance	72 75	
68492—Car repairs	1 96	
69050—Interline freight balance	538 51	
69160—Car service balance	23 25	
68975—Car repairs	65	
69799—Car service balance	40 35	
70067—Claim	3 90	
70090—Car repairs	24 46	
70328— " "	16 40	
70368—Car service balance	31 20	
70534—Interline freight balance	133 65	
70929—Car service balance	45 60	
71217—Proportion expense *re* immigrant business	61	
71293—Claim	1 34	
71315—Interline freight balance	114 64	
71460—Car service balance	33 60	
		$1,551 25

Baltimore & Ohio Railroad, Baltimore, Md.

64377—Car service balance	$94 95	
64174—Car repairs	2 59	
64124—Value cars destroyed by fires of July, 1916	2,280 41	
65096—Car service balance	37 35	
66099— " " "	334 80	
65810—Car repairs	37 63	
65942— " "	41 70	
66274—Car service balance	163 80	
66422—Ticket balance	2 78	
67271—Car service balance	54 00	
67347—Car repairs	10 50	
67664—Car service balance	150 00	
67832—Car repairs	22 29	
68633—Car service balance	109 50	
68810—Car repairs	3 88	
69292—Claims	116 75	
69661—Car repairs	7 04	
69795—Car service balance	24 10	
70324—Car repairs	14 90	
70364—Car service balance	67 60	
71091—Car repairs	3 09	
71329— " "	95	
71450—Car service balance	13 20	
71632—Car repairs	11 71	
		$3,605 52

BUFFALO, ROCHESTER & PITTSBURG RAILWAY, ROCHESTER, N.Y.

64379—Car service balance	$14 85	
64587—Car repairs	2 00	
64178— " "	3 57	
65098—Car service balance	45 00	
65857— " " "	47 85	
66827—Car repairs	2 14	
67273—Car service balance	229 50	
67345—Car repairs	7 42	
67666—Car service balance	648 75	
68387—Car repairs	5 43	
68635—Car service balance	571 50	
69811— " " "	56 40	
70092—Car repairs	17 67	
70144—Claim	6 50	
70478—Car service balance	100 80	
70927— " " "	12 70	
71452— " " "	29 40	
71630—Car repairs	29 00	
		$1,830 48

BESSEMER & LAKE ERIE RAILROAD, PITTSBURG, PA.

64381—Car service balance	$30 40	
65102— " " "	40 95	
66121— " " "	64 05	
66276— " " "	68 00	
67275— " " "	46 95	
67668— " " "	230 55	
68637— " " "	630 00	
69797— " " "	37 80	
70366— " " "	70 60	
70522—Car repairs	3 77	
70961—Car service balance	108 00	
71456— " " "	27 00	
		$1,358 07

BUFFALO & SUSQUEHANNA RAILROAD CORPORATION, BUFFALO, N.Y.

64383—Car service balance	$862 20	
65000—Car repairs	4 64	
65100—Car service balance	592 65	
66139— " " "	640 35	
65786—Car repairs	21 36	
66278—Car service balance	1,747 50	
66801—Car repairs	8 54	
67221—Cars damaged in fire of July 29, 1916	591 97	
67371—Car service balance	1,461 50	
67672— " " "	1,179 75	
68643— " " "	2,106 00	
68216—Car repairs	1 47	
69044— " "	34 82	
69158—Car service balance	539 70	
69801— " " "	954 00	
70088—Car repairs	220 68	
70326— " "	5 60	
70370—Car service balance	965 40	
70931— " " "	774 00	
71085—Car repairs	57 62	
71454—Car service balance	1,424 60	
		$14,194 35

BOYNE CITY, GAYLORD & ALPINA RAILROAD CO., BOYNE CITY, MICH.

64170—Car repairs	$ 42	
71690—Car service balance	4 20	
		$4 62

BOSTON & ALBANY RAILROAD, NEW YORK, N.Y.

64176—Car repairs	$4 41	
65300—Car destroyed in fires of July, 1916	934 84	
65913—Car repairs	1 88	
67868—Ticket balance	2 78	
71087—Car repairs	6 20	
		$950 11

WALTER BINCH, KENABEEK P.O., ONT.

64286—Ties	$103 78	
		$103 78

THOS. BRITTON, THORNLOE P.O., ONT.

64286—Ties	$14 85	
		$14 85

THE BOECKH BROS. COMPANY, LIMITED, TORONTO, ONT.

64416—Switch brooms	$51 00	
65273— " "	42 50	
67090— " "	31 50	
68075—Brushes	179 53	
68214— "	12 54	
		$317 07

THE BROWN BROTHERS, LIMITED, TORONTO, ONTARIO.

64418—Stationery supplies	$ 17	
66251— " "	62	
67092— " "	5 81	
		$6 60

L. W. BROWN, SOUTH PORCUPINE, ONT.

64796—Claim No. 13175, loss, damage to pickles	$2 04	
67251— " 13711, loss, potatoes	17 40	
68264— " 14805, damage to syrup	1 48	
68969— " 14678, loss, cornmeal	2 75	
71233— " 15972, damage to fruit jars	2 07	
		$25 74

THE BERLIN LION BREWERY, LIMITED, KITCHENER, ONT.

64866—Claim No. 12774, loss malt extracts	$87 60	
		$87 60

BANGOR & AROOSTOOK RAILROAD, BANGOR, ME.

65104—Car service balance	$ 45	
67670— " " "	6 00	
68641— " " "	1 50	
69658— " " "	9 01	
71089—Car repairs	77	
		$17 73

BRITISH AMERICAN OIL CO., LIMITED, TORONTO, ONT.

65106—Car service balance	$3 87	
		$3 87

B. BRILL, NORTH BAY, ONT.

65284—Groceries	$25 18	
		$25 18

BURROUGHS ADDING MACHINE COMPANY, TORONTO, ONT.

64871—Inspection of machine	$4 00	
65996—Ribbon	1 00	
66937— "	1 00	
68887—Paper	1 23	
69630— "	2 94	
70821—Inspection of machine	4 00	
		$14 17

L. BOIVIN, COCHRANE, ONT.

64953—Claim No. 13345, loss almonds	$2 85	
65682— " 13174, loss wine	6 00	
66865— " 13670, loss butter	93	
69706— " 13176, loss meat	17 16	
		$26 94

BUCOVETSKY BROTHERS, TIMMINS, ONT.

64955—Claim No. 11791, damage to eggs	$2 55	
68792— " 11795, loss molasses	2 01	
		$4 56

THE BUFFALO MINES, LIMITED, COBALT, ONT.

64957—Claim No. 10907, overcharge silver ore	$122 53	
70018—Claims Nos. 13875 and 12490, overcharge silver ore	77 10	
70258—Claim No. 10905, overcharge silver ore	164 67	
		$364 30

C. O. BAKER, NORTH BAY, ONT.

65081—Travelling expenses	$16 20	
		$16 20

J. C. BOGART, THORNLOE, ONT.

65159—Ties	$32 85	
65884—Slabs	17 50	
66106—Ties	112 55	
66106— "	14 00	
66457—Slabs	32 38	
66829—Poles	9 00	
68065— "	20 00	
68388— "	54 00	
		$292 28

O. BELANGER, ELK LAKE, ONT.

65543—Laundry	$4 68	
		$4 68

P. D. BOYER, HAILEYBURY, ONT.

65649—Claim No. 13537, loss sardines	$ 12	
69290— " 15174, loss clothes pins	90	
69127— " 13536, loss potatoes	1 75	
69983— " 14860, loss sugar	3 53	
		$6 30

CHAS. BRENT, CHARLTON, ONT.

65727—Claim No. 13049, loss oil	$2 70	
		$2 70

THE BELT RAILWAY COMPANY OF CHICAGO, CHICAGO, ILL.

65911—Car repairs	$1 18	
68487— " "	58	
69659— " "	49	
		$2 25

T. J. BAKER, REDWATER, ONT.

66151—Expenses	$5 00	
		$5 00

BIRD & SON, HAMILTON, ONT.

65436—Roofing	$124 95	
70640— "	99 22	
		$224 17

I. D. BEDARD, NORTH BAY, ONT.

65552—Travelling expenses	$14 10	
		$14 10

BEER, SONDHEIMER & CO., NEW YORK, N.Y.

65680—Claim No. 13312, overcharge car zinc dust	$6 27	
68418— " 10243, overcharge car zinc dust	65 38	
		$71 65

THE BALTIMORE & OHIO, CHICAGO TERMINAL RY. CO., CHICAGO, ILL.

65746—Car repairs	$1 98	
		$1 98

F. N. BURT CO., LIMITED, TORONTO, ONT.

65998—Stationery supplies	$5 08	
66587— " "	62 23	
		$67 31

MRS. EDWARD BARR, KELSO, ONT.

66474—Board furnished auxiliary crew	$5 50	
68238— " " engineering party	23 90	
		$29 40

S. BEDARD, NORTH BAY, ONT.

66562—Refund, rent	$5 00	
		$5 00

HENRY BERNDT, COCHRANE, ONT.

66301—Ice	$339 15	
		$339 15

BUREAU OF EXPLOSIVES, NEW YORK, N.Y.

66351—Accident bulletins	$4 50	
67264—Assessments	32 40	
68206—Accident bulletins	4 50	
71182— " "	8 00	
		$49 20

BURROWES & PARMELEE, NORTH BAY, ONT.

66353—Carbon lamps	$2 85	
		$2 85

H. Bedford, Krugerdorf, Ont.

66443—Claim No. 14034, loss flour	$ 60	
		$ 60

Boston Creek Stores, Boston Creek, Ont.

66461—Groceries	$5 30	
		$5 30

Buffalo Brake Beam Company, New York, N.Y.

66515—Fulcrums	$50 00	
		$50 00

Beardmore & Company, Toronto, Ont.

66573—Leather	$19 43	
69478— "	16 66	
		$36 09

Butterfield & Company, Inc., Rock Island, Que.

66575—Tools	$5 02	
66948—Dies	2 50	
		$7 52

Brown & Company, Incorporated, Pittsburg, Pa.

66997—Iron	$15 87	
		$15 87

L. Brewster-Porter, Toronto, Ont.

67033—Supplies for car "Temagami"	$1 61	
		$1 61

The D. W. Bosley Company, Chicago, Ill.

67079—Weather strip	$39 00	
		$39 00

S. M. Beach, Schumacher, Ont.

67245—Claim No. 13981, loss feed	$3 21	
		$3 21

Buffalo Creek & Gauley R. R. Co., Dundon, Va.

67369—Car service balance	$11 25	
67674— " " "	5 25	
		$16 50

F. H. Bonneville, Cobalt, Ont.

67513—Claim No. 13874, loss soap	$12 80	
		$12 80

Joseph Boisvert, Swastika, Ont.

67581—Board and lodging engineering party	$81 35	
		$81 35

T. W. Boisvert, Swastika, Ont.

67583—Board and lodging for engineering party	$119 50	
67749— " " " "	10 00	
		$129 50

BOUVIER & HUTCHINSON, TORONTO, ONT.

66728—Envelopes	$13 50	
68752— "	16 30	
		$29 80

BRINTON CARPET COMPANY, LTD., PETERBOROUGH, ONT.

66752—Rug	$34 43	
		$34 43

J. BRIEN, NUSHKA, ONT.

66876—Ties	$43 69	
68388— "	18 70	
		$62 39

BOSS LOCK NUT COMPANY OF CANADA, LIMITED, MONTREAL, QUE.

66886—Nuts	$69 20	
67695— "	139 65	
		$208 85

T. BABE, SWIFT CURRENT, SASK.

67262—Expenses account delayed train	$3 00	
		$3 00

ALEX. BROWN, COCHRANE, ONT.

67318—Claim No. 14306, overcharge on apples	$5 02	
		$5 02

THOS. BREEN, GUIGUES, QUE.

67731—Seed potatoes	$58 00	
		$58 00

R. H. BROWN COMPANY, LATCHFORD, ONT.

67853—Claim No. 13927, loss rolled oats	$4 00	
		$4 00

F. C. BURROUGHES FURNITURE COMPANY, LIMITED, TORONTO, ONT.

67937—Claim No. 14473, loss rug and rocker	$43 50	
		$43 50

MRS. WESLEY J. BLODGETT, SHERBROOKE, QUE.

68049—Claim No. 12958, loss personal and household effects by forest fire	$600 00	
		$600 00

BRUNETTE SAW MILL COMPANY, LTD., NEW WESTMINSTER, B.C.

68053—Lumber	$325 70	
68422— "	475 48	
		$801 18

CLARENCE BROOKS & COMPANY, NEWARK, N.J.

68083—Car renovator	$2 25	
		$2 25

MISS JANET W. BEATH, NORTH BAY, ONT.

68581—Claim No. 14122, damage to victrola records	$21 80	
		$21 80

ARTHUR BAILLOD, PORQUIS P.O., ONT.

68597—Ties	$248 90	
68946— "	104 00	
		$352 90

HASSAN BOTARIE, TORONTO, ONT.

68174—Claim No. 14022, loss dry goods	$125 00	
		$125 00

G. BURTON, MATHESON, ONT.

68392—Donation, steer killed	$15 00	
		$15 00

BARBER-ELLIS, LIMITED, TORONTO, ONT.

68162—Stationery supplies	$4 25	
68890— " "	4 25	
		$8 50

G. BARONE, NORTH BAY, ONT.

68794—Travelling expenses	$9 80	
		$9 80

BIRMINGHAM SOUTHERN RAILROAD CO., BIRMINGHAM, ALA.

68712—Car repairs	$5 26	
		$5 26

JOHN BERTRAM & SONS, COMPANY, LIMITED, DUNDAS, ONT.

68744—Back geared crank shaper	$900 00	
		$900 00

THE BINKLEY COMPANY, NEW LISKEARD, ONT.

68971—Claim No. 14623, loss cream of wheat	$3 65	
		$3 65

GEORGE J. BEATTIE, TORONTO, ONT.

69125—Repairing fan	$4 80	
		$4 80

E. H. BASTIAN, SHILLINGTON, QUE.

69483—Claim No. 14882, damage to china cabinet	$7 00	
		$7 00

BUCKMAN TOURIST COMPANY, BOSTON, MASS.

69751—Commissions	$11 56	
		$11 56

THE BARRETT COMPANY, NEW YORK, N.Y.

69803—Car service balance	$1 74	
70372— " " "	1 74	
70935— " " "	1 74	
71462— " " "	1 74	
		$6 96

WM. BARONET, NORTH BAY, ONT.

69410—Travelling expenses	$18 25	
		$18 25

BERGERON & FRERE, VILLE MARIE, QUE.

69564—Claim No. 15481, damage to spinning wheel ..... $2 75 — $2 75

G. M. BERTHIAUME, COCHRANE, ONT.

69566—Claim No. 14498, loss of hardware ..... $5 00 — $5 00

THE BEAVER BOARD COMPANIES, BUFFALO, N.Y.

70016—Claim No. 15785, overcharge on oats ..... $1 25 — $1 25

REV. A. H. BARKER, DELTA, ONT.

70138—Claim No. 13611, overcharge on household goods ..... $12 26 — $12 26

H. C. BUSH & COMPANY, NEW LISKEARD, ONT.

70140—Claim No. 15325, damage to glassware ..... $5 46 — $5 46

H. BOSTROM, SOUTH PORCUPINE, ONT.

70142—Claim No. 15175, loss bag of feed ..... $2 12 — $2 12

M. BOIVIN, TIMMINS, ONT.

70224—Ties	$2,349 82	
70224— "	149 62	
70281— "	1,889 88	
71221— "	1,342 73	
70684— "	1,373 42	
		$7,105 47

A. W. BROWN, NORTH BAY, ONT.

70303—Expenses	$14 00	
70980— "	14 00	
		$28 00

R. G. BUCHANAN, NORTH BAY, ONT.

70343—Award W. C. B. *re* alleged injuries ..... $9 29 — $9 29

J. A. BELLAND, HAILEYBURY, ONT.

70605—Claim No. 15226, damage to chair ..... $1 35 — $1 35

BORDEN-CANADIAN COMPANY, TORONTO, ONT.

70677—Die stock ..... $12 00 — $12 00

E. BERUBE, TIMMINS, ONT.

70789—Claim No. 15236, loss potatoes ..... $9 85 — $9 85

BRITISH COLUMBIA ELECTRIC RAILWAY CO., VANCOUVER, B.C.

70933—Car service balance ..... $4 95 — $4 95

ELMER BROWN, NORTH BAY, ONT.

70638—Travelling expenses	$15 05	
		$15 05

R. BARRON, LIMITED, TORONTO, ONT.

70880—Groceries	$5 40	
		$5 40

BETHLEHEM STEEL COMPANY, SOUTH BETHLEHEM, PA.

71048—Latches, etc.	$50 40	
		$50 40

BEAMISH & SMITH, LIMITED, NORTH BAY, ONT.

71278—Felt, etc.	$13 50	
		$13 50

BROWN ENGINEERING CORPORATION, LTD., TORONTO, ONT.

71280—Rollers, etc.	$504 74	
		$504 74

A. A. COLE, MINING ENGINEER, COBALT, ONT.

63233—Salary, November, 1916	$285 00	
63381—Expenses	35 75	
63858—Salary, December, 1916	285 00	
64094—Expenses	4 88	
64671—Salary, January, 1917	285 00	
64875—Expenses	20 71	
65406—Salary, February, 1917	285 00	
65920—Expenses	4 12	
66179—Salary, March, 1917	285 00	
66545—Expenses	10 03	
66650—Salary, April, 1917	285 00	
66836—Expenses	3 99	
67631—Salary, May, 1917	285 00	
67997—Expenses	4 20	
67950—Salary, June, 1917	285 00	
68242—Expenses	5 13	
68829—Salary, July, 1917	285 00	
68933—Expenses	3 12	
69348—Salary, August, 1917	285 00	
69634—Expenses	18 38	
70083—Salary, September, 1917	285 00	
70487—Expenses	4 76	
70556—Salary, October, 1917	285 00	
70736—Expenses	5 87	
		$3,540 94

COBALT DAILY NUGGET, LIMITED, COBALT, ONT.

63257—Mining booklets	$37 50
63843—Stationery supplies	19 00
64012—Advertising	21 84
64464—Stationery supplies	5 45
64524—Advertising	30 40
65066— "	24 60
65348— "	43 26
65323—Stationery supplies	6 50
65818—Advertising	23 54
66082—Stationery supplies	31 50
66566—Advertising	6 90
66359—Stationery supplies	3 25
67083— " "	4 68

COBALT DAILY NUGGET, LTD., COBALT, ONT.—*Continued.*

67125—Advertising	24 94	
67406— "	65 28	
68099— "	51 10	
68517—Stationery supplies	36 55	
68536—Advertising	24 12	
69361— "	23 19	
69563—Stationery supplies	2 25	
69812—Advertising	27 28	
70194— "	15 36	
70801— "	22 26	
71205— "	5 10	
70856— "	27 61	
		$583 46

THE CANADIAN PACIFIC RAILWAY COMPANY, MONTREAL, QUE.

63261—Freight settlement	$1,825 76
63285— " "	1,285 92
63321— " "	3,100 11
63613— " "	4,762 91
63657—Supplies furnished car "Temagami"	25 28
63721—Claims	11 42
63971—Terminal facilities, North Bay	636 10
64345—Interline freight balance	10,713 15
64383a—Car service balance	1,955 95
63880—Freight settlement	2,662 36
63884— " "	2,478 81
63972— " "	3,834 03
64180—Car repairs	36 12
64102—Freight settlement	3,736 44
64228—Car repairs	35
64402—Claims	13 56
64526—Terminal charges	1 39
64642—Cleaning car	1 00
64844—Claim	5 18
64924—Tariffs	1 12
65108—Car service balance	2,068 29
65294—Interline freight balance	9,079 29
64685—Freight settlement	1,172 00
64711— " "	2,748 33
64767— " "	1,708 96
64913—Claim	33 37
64941—Freight settlement	2,571 12
65223—Claim	2 36
65539—Terminal facilities, North Bay	637 80
65601—Tariffs	21 21
65729—Claim	1 31
65745—Interline freight balance	4,797 43
65789—Terminal charges	1 77
65861—Car service balance	2,524 80
65915—Car repairs	1 90
65975—Ticket balance	4,782 16
65424—Freight settlement	431 79
65432— " "	1,851 78
65578— " "	614 28
65910—Terminal facilities, North Bay	667 52
66280—Car service balance	2,064 45
66424—Ticket balance	2,171 94
66428—Interline freight balance	3,831 65
66528—Claims	97 72
66620—Car repairs	159 80
66211—Freight settlement	1,015 97
66223— " "	1,382 71
66323— " "	2,307 60
66633— " "	3,919 03
66803—Terminal facilities, North Bay	813 79
66947—Claims	84 00

THE CANADIAN PACIFIC RAILWAY COMPANY, MONTREAL, QUE.—*Continued.*

67421—Interline freight balance	2,805	77
67423—Cars damaged in fires of July 29, 1916	8,040	08
67473—Ticket balance	2,831	24
67501—Car service balance	2,436	06
67539—Terminal facilities, North Bay	676	76
66680—Freight settlement	4,735	12
66692— " "	5,814	52
66762— " "	5,595	82
66862— " "	15,136	21
67040— " "	6,775	24
67380—Claims	70	42
67478—Terminal facilities, North Bay	647	48
67636—Heating cars, North Bay	32	94
67650—Interline freight balance	5,305	36
67676—Car service balance	2,693	10
67854—Ticket balance	2,738	10
67667—Freight settlement	1,074	67
67681— " "	376	92
67795— " "	2,195	90
68141—Claims	36	44
68441—Terminal facilities, North Bay	686	87
68521—Tariffs		84
68657—Car service balance	3,147	19
68793—Ticket balance	2,981	10
67976—Freight settlement	1,811	36
68012— " "	3,260	03
68046—Interline freight balance	7,858	51
68218—Cost of heating cars, North Bay	28	50
68718—Tariffs	7	86
68506—Claims	112	06
68950—Terminal facilities, North Bay	648	29
69130—Interline ticket balance	2,678	20
69162—Car service balance	1,895	10
69302—Car repairs	383	20
69304—Claims	28	07
68893—Freight settlement	564	33
68899—Interline freight balance	6,567	35
68957—Freight settlement	2,213	29
69181—Claims	16	96
69757—Cost of heating cars, North Bay	7	74
69805—Car service balance	1,860	91
69941—Interline ticket balance	5,344	64
70075a—Terminal facilities, North Bay	678	74
70003—Interline freight balance	2,898	11
69372—Freight settlement	4,041	11
69382— " "	3,830	72
69422— " "	264	30
69502— " "	10,120	79
70178—Machine bolts, etc.	21	82
70256—Interline freight balance	5,344	49
70290—Claim	123	25
70538—Terminal facilities, North Bay	698	74
70374—Car service balance	1,858	97
70500—Interline ticket balance	2,627	69
70217—Freight settlement	6,528	21
70225— " "	5,106	36
70285— " "	2,124	84
70345— " "	545	70
70413—Claims	116	86
70937—Car service balance	1,625	81
71295—Claims	83	64
71319—Interline freight balance	3,426	01
71373—Cars destroyed by fire of July, 1916	551	52
71363—Terminal facilities, North Bay	631	61
70588—Freight settlement	213	99
70634— " "	302	14
71426—Claims	43	68

THE CANADIAN PACIFIC RAILWAY COMPANY, MONTREAL, QUE.—*Continued.*

71584—Interline ticket balance	1,833 46	
71700—Interline freight balance	2,003 02	
71464—Car service balance	2,114 58	
		$263,533 80

L. K. COMSTOCK & COMPANY, NEW YORK, N.Y.

63271—Installation annunciator system	$85 00	
		$85 00

CANADIAN NORTHERN RAILWAY COMPANY, TORONTO, ONT.

63275—Freight settlement	$504 99
63291— " "	812 56
63451— " "	88 38
63453— " "	988 20
63677—Interline freight balance	5,705 86
64359—Ticket balance	296 76
64415—Car service balance	762 75
64539—Interline freight balance	2,004 57
64603—Car repairs	5 07
63878—Freight settlement	1,686 43
63886— " "	1,971 18
63956— " "	1,127 35
64062— " "	328 32
64194—Car repairs	7 64
64926—Transfering loads	77
65008—Car repairs	12 65
65148—Car service balance	672 35
65286—Grading, etc., North Bay	1,457 05
65310—Car destroyed by fire of July, 1916	633 82
65378—Interline freight balance	728 37
64667—Freight settlement	1,583 53
64729— " "	318 43
64783— " "	567 65
64947— " "	186 27
66127—Car service balance	1,193 25
65422—Freight settlement	799 03
65446— " "	249 43
65482— " "	367 21
65586—Freight settlement	132 25
65794—Car repairs	9 56
65892—Interline freight balance	28 60
65946—Transferring loads	1 86
66312—Car service balance	900 60
66608—Car repairs	21 78
66632—Interline freight balance	1,253 42
66205—Freight settlement	764 08
66249— " "	1,526 71
66541— " "	1,444 82
66665—Transferring loads	3 08
66915—Tariffs	90
66971—Car repairs	53 72
67309—Car service balance	619 80
67595—Interline freight balance	1,342 70
66678—Freight settlement	564 43
66754— " "	126 75
66914— " "	250 80
67378—Claims	4 27
67792—Car service balance	648 96
67810—Car repairs	10 57
67896—Interline freight balance	3,529 80
68477—Car repairs	4 34
68677—Car service balance	876 90
68791—Ticket balance	6 15
68815—Interline freight balance	1,905 42
67974—Freight settlement	438 98
67986— " "	264 63
68030— " "	719 51

CANADIAN NORTHERN RAILWAY COMPANY, TORONTO, ONT.—*Continued.*

68616—Claims	17 26	
68246—Freight settlement	386 32	
68994—Car repairs	59 58	
69058—Interline freight balance	1,458 10	
69132—Interline ticket balance	20 39	
69186—Car service balance	216 00	
69296—Claims	3 01	
68877—Freight settlement	1,222 12	
68895— " "	2,194 68	
68965— " "	1,716 69	
69837—Car service balance	348 90	
69943—Interline ticket balance	26 25	
69378—Freight settlement	35 09	
69394— " "	399 36	
69440— " "	324 83	
69620— " "	1,182 71	
70100—Car repairs	33 56	
70406—Car service balance	400 80	
70502—Interline ticket balance	3 64	
70215—Freight settlement	337 96	
70385— " "	352 91	
70405—Supplies car "Ontario"	209 16	
70959—Car service balance	296 10	
71065—Interline ticket balance	222 15	
71299—Claim	10 70	
71317—Interline freight balance	992 36	
70580—Freight settlement	275 70	
70830—Car repairs	19 72	
71274—Supplies, car "Ontario"	40 71	
71490—Car service balance	232 20	
71634—Car repairs	1 66	
71698—Interline freight balance	240 05	
		$55.795 93

CANADA CEMENT COMPANY, LIMITED, MONTREAL, QUE.

63277—Cement	$295 50	
65085— "	347 22	
68011— "	531 87	
68194— "	1,063 74	
69484— "	531 88	
70592— "	404 22	
		$3,174 43

CANADIAN EDGE TOOL COMPANY, GALT, ONT.

63297—Railroad adze	$49 98	
63912—Sheeting	67 16	
66698—Axes	92 02	
69490—Adze	66 64	
70247—Axes	21 02	
		$296 82

COCHRANE HARDWARE COMPANY, LIMITED, NORTH BAY, ONT.

63383—Hardware supplies	$9 27	
63847— " "	38 08	
63942— " "	1 71	
63982— " "	67 09	
64072— " "	59 60	
64296— " "	48 80	
64370—Installation plumbing system, Porquis Junction and Iroquois Falls	1,782 76	
64436—Hardware supplies	36 26	
64747—Refund deposit on contract plumbing system, Porquis Junction station	35 50	
64785—Refund deposit on contract plumbing and sewage, Iroquois Falls	100 00	

COCHRANE HARDWARE COMPANY, LTD., NORTH BAY, ONT.—*Continued.*

64809—Hardware supplies	38	03
64963—Claim No. 12483, damage to stove base	4	46
65091—Hardware supplies	7	35
65207— " "	68	92
65375— " "	55	74
65429— " "	97	58
66110— " "	91	37
66287— " "	2	82
66589— " "	121	72
67069— " "	49	88
67163— " "	44	00
66866— " "	139	87
67130— " "	16	25
67464— " "	136	57
67697— " "	111	72
68321— " "	258	34
68308— " "	155	93
69090— " "	21	90
69267— " "	17	84
69613— " "	200	53
69488— " "	3	23
69702— " "	6	42
69790— " "	64	82
70243— " "	94	02
70381— " "	78	09
70697— " "	175	32
71203— " "	70	70
70692— " "	19	60
70950—Claim No. 14234, damage to china tank	43	35
71054—Hardware supplies	211	55
71284— " "	18	04
		$4,605 03

CANADIAN COSOLIDATED RUBBER COMPANY, LIMITED, TORONTO, ONT.

63385—Basin and bath plugs	$1	18
63914—Rubber boots	5	49
63916—Rubber bands	22	54
64010—Rubber rings	3	29
64070—Packing	11	87
64811— "	28	95
64817—Packing and hose	109	52
64849— " "	143	19
64995—Rubber rings	1	96
65089—Valves and hose	42	24
64887—Hose and bands	302	82
65490—Hose	840	18
66217— "	15	85
66281—Hose clamps and rubber boots	7	69
66285—Rubber bands	22	54
66704—Rubber boots	27	93
66706—Matting and rubber bands	73	60
66916—Rubber boots, etc.	71	23
67701—Packing and hose	134	61
67733—Hose	231	54
68132—Rubber bands, etc.	51	89
68198—Rubber boots	21	17
68940—Rubber boots, etc.	38	49
68883— " "	7	06
69113—Valves	9	58
69450—Rubber bands	12	49
70287— " "	12	49
70383—Rubber boots	67	03
70387—Rubber bands	12	49
70590—Rubber boots	7	06
70716—Rubber bands	12	49
70852—Hose	39	50
70854—Rubber boots	14	11
		$2,404 07

THE CARTER INK COMPANY, MONTREAL, QUE.

63435—Ink, etc.	$52 59	
63655— "	24 99	
63978— "	36 13	
65584— "	31 73	
66874— "	48 15	
67765— "	40 67	
67993— "	35 28	
68370—Mucilage	7 35	
68921— "	7 97	
		$284 86

CRAIN PRINTERS, LIMITED, OTTAWA, ONT.

63437—Stationery supplies	$57 51	
65299— " "	8 05	
66014— " "	85 17	
66357— " "	38 48	
68103— " "	12 00	
71288— " "	51 32	
		$252 53

J. J. CORBEIL, DANE, ONT.

63439—Dynamite	$4 35	
63849—Groceries	4 78	
68888— "	4 89	
		$14 02

THOS. COOK & SON, NEW YORK, N.Y.

63465—Commission on ticket sales	$ 45	
64049— " " "	94	
66478— " " "	32	
67547— " " "	82	
67230— " " "	1 72	
68448— " " "	67	
		$4 92

CINCINNATI, NEW ORLEANS & TEXAS PACIFIC RAILWAY CO., CINCINNATI, OHIO.

63467—Car repairs	$3 31	
65118—Car service balance	17 10	
65889— " " "	25 80	
65917—Car repairs	5 49	
67283—Car service balance	66 75	
67477—Ticket balance	14 03	
67806—Car repairs	2 85	
67844—Car service balance	32 25	
68135—Car repairs	3 35	
68714— " "	78	
69168—Car service balance	15 60	
70782—Car repairs	16	
		$187 47

CANADIAN GOVERNMENT RAILWAYS, MONCTON, N.B.

63495—Car damaged by fire of July, 1916	$294 00
63553—Car repairs	148 00
63769—Claims	42 15
63933—Supplies car "Temagami"	8 09
63935—Claims	79 67
64231—Proportion commissions	3 53
64417—Car service balance	572 56
64563—Fuel supplied private car	1 47
64601—Car repairs	49 17
63954—Freight settlement	111 91
64056— " "	80 09
64224—Car repairs	31 99

CANADIAN GOVERNMENT RAILWAYS, MONCTON, N.B.—*Continued.*

64386—Claims	39 31
64868— "	25 21
64896—Proportion commissions	13 86
64956—Claims	46 21
65048— "	53 76
65150—Car service balance	185 95
65276—Ticket balance	1,518 66
65376—Interline freight balance	5,171 17
65010—Car repairs	60 38
64839—Freight settlement	186 82
64897— " "	538 78
65557—Laundry, car "Temagami"	1 82
65695—Claims	137 27
65775— "	130 88
65787—Proportions commissions	13 44
65813—Ice supplied private cars	5 30
65925—Car repairs	381 17
65979—Ticket balance	62 93
66141—Car service balance	826 59
65600—Cars destroyed by fire of July, 1916	673 91
65878—Claims	178 02
66428—Ticket balance	254 05
66622—Car repairs	254 71
66273—Freight settlement	997 41
66823—Claims	150 22
66895— "	39 68
66909—Car repairs	131 33
66955—Line expenses "National Train"	450 07
67071—Car repairs	8 71
67479—Ticket balance	858 82
66858—Claims	206 12
67136—Car repairs	131 15
67510—Claims	159 43
67594— "	57 11
67642—Hire of steam crane and auxiliary	206 63
67880—Expense operating dining car, "National Train"	261 43
67915—Freight settlement	251 31
68285—Expense operating dining car "National Train"	73 69
68583—Car repairs	85 84
67980—Freight settlement	51 78
68006— " "	53 34
68438—Claims	37 57
68768—Coal	32 91
68462—Claims	32 01
68474—Car repairs	48 18
69052—Weighing cars	2 00
69134—Ticket balance	560 70
69170—Car service balance	1,037 11
69298—Line expense "National Train"	11 26
69300—Claims	28 53
68861—Freight settlement	461 49
69485—Claims	8 76
69761—Line service expense, joint trains	420 37
69839—Car service balance	835 24
70029—Commissions	99
70069—Claim	27 11
70132—Car repairs, etc.	294 31
70415—Claims	25 48
70553—Line service, joint trains	1,310 80
70963—Car service balance	1,425 37
71301—Claims	73 86
70642—Freight settlement	23 79
70976—Claims	48 49
70978— "	44 30
71006—Line service, joint trains, etc.	982 65
71200—Claims	103 22
71428— "	41 71
71492—Car service balance	408 46
	$24,683 57

CANADIAN YALE & TOWNE, LIMITED, STAMFORD, CONN.

63555—Locks	$10 31	
64815—Padlocks and latches	54 81	
65087—Padlocks	47 36	
65205—Door closers	14 70	
66289—Closers and springs	11 26	
66577—Locks	3 59	
66918—Latches	16 13	
67482—Triplex block	51 75	
68249—Padlocks, etc.	88 39	
68303—Keys, etc.	11 03	
68098—Latches	24 19	
69840—Padlocks	55 94	
70711—Locks	3 99	
71032— "	40 56	
		$434 01

CANADA PAINT COMPANY, LIMITED, MONTREAL, QUE.

63557—Freight charges	$18 76	
63813—Turpentine	30 84	
64442—Paint, etc.	531 99	
64636— "	32 49	
65325— "	624 42	
65409—Heat liquid	6 75	
66028—Paint, etc.	520 75	
66341—Rubbing bricks	10 00	
67205—Paint	198 85	
67468— "	15 60	
67735—Varnish and paint	52 90	
67905—Paint	98	
68323—Paint, raw oil, etc.	1,815 55	
68342—Paint	427 23	
69269— "	158 19	
69667— "	514 61	
69792— "	35 00	
70245—Felt	27 87	
71044—Paint	398 88	
		$5,421 66

CANADIAN BRONZE, LIMITED, MONTREAL, QUE.

63559—Express charges	90	
63817—Castings	163 20	
64448—	320 60	
66108— "	568 25	
66599— "	2,264 36	
67233— "	606 59	
67220—Brass	919 20	
67644—Castings	664 13	
67798— "	2,085 80	
68307—Journal, bearings, etc.	1,413 12	
68286—Castings	1,787 90	
69763—Castings, etc.	258 76	
69830—Liners, etc.	1,872 13	
70525— "	389 32	
70685— "	161 86	
71058—Brass, etc.	250 96	
		$13,727 08

S. B. CLEMENT, C. E. & S. M., NORTH BAY, ONT.

63585—Salary, November, 1916, less deductions Patriotic Fund..	$335 00
63685—Travelling expenses	28 00
64348—Salary, December, 1916, less deductions Patriotic Fund ..	335 00
64446—Travelling expenses	16 55
65067—Salary, January, 1917, less deductions Patriotic Fund ..	335 00

S. B. Clement, C. E. & S. M., North Bay, Ont.—*Continued.*

65843—Travelling expenses	18 35	
65558— " "	11 85	
65598—Salary, February, 1917	345 00	
66407—Travelling expenses	73 47	
66549—Salary, March, 1917	345 00	
66926—Salary, April, 1917	345 00	
67290—Travelling expenses	20 45	
67893—Salary, May, 1917	345 00	
68574—Travelling expenses	29 05	
68296—Salary, June, 1917	345 00	
69027—Salary, July, 1917	345 00	
69610—Salary, August, 1917	345 00	
69636—Travelling expenses	62 05	
70349—Salary, September, 1917	345 00	
70910—Salary, October, 1917	345 00	
71192—Travelling expenses	24 15	
		$4,393 92

L. E. Chalenor, Atlanta, Ga.

63659—Tariffs	$1 44	
66036— "	1 16	
		$2 60

Canadian Freight Association, Montreal, Que.

63661—Proportion expenses	$37 74	
64528— " "	39 23	
65163— " "	36 52	
66018— " "	36 47	
66259—Tariffs	2 37	
66815—Proportion expenses	36 60	
67123—Tariffs	10 50	
67222—Proportion expenses	38 35	
67288—Tariffs	2 41	
68019—Proportion expenses	39 13	
69079— " "	75 86	
69137—Tariffs	2 52	
70051— "	41 13	
70451—Proportion expenses	45 04	
70539—Tariffs	28 00	
70653—Proportion expense	41 15	
71330— " "	45 81	
71388— " "	60	
		$559 43

A. Cavanagh, North Bay, Ont.

63683—Travelling expenses	$11 00	
66543— " "	12 20	
69468— " "	8 75	
		$31 95

Canadian Bank of Commerce, Cobalt, Ont.

63697—Claim No. 12897, shortage casting	$4 73	
		$4 73

R. Cosca, South Porcupine, Ont.

63699—Claim No. 12618, damage to biscuits	$6 26	
		$6 26

E. W. Cook, North Bay, Ont.

63717—Award W. C. B. *re* alleged injuries	$33 84	
63929— " " " "	22 56	
64789— " " " "	63 92	
65119— " " " "	11 28	

E. W. Cook, North Bay, Ont.—*Continued.*

68003—Award W. C. B. *re* alleged injuries	$26 40	
67988— " " " "	6 60	
68847— " " " "	6 60	
69352— " " " "	6 60	
70081— " " " "	6 60	
70554— " " " "	6 60	
		$191 00

Chicago, Burlington & Quincy Railroad, Chicago, Ill.

63723—Claims	$42 34	
64355—Ticket balance	5 59	
64184—Car repairs	15 55	
65014— " "	69 14	
65130—Car service balance	47 70	
65881— " " "	43 80	
65790—Car repairs	64 24	
66296—Car service balance	81 40	
66667—Car repairs	6 19	
66893—Claims	5 15	
67291—Car service balance	46 00	
67567—Car repairs	27 22	
66788—Claims	14 59	
67376— "	14 50	
67688—Car service balance	42 00	
67802—Car repairs	12 75	
68347—Claim	1 06	
68647—Car service balance	12 50	
69294—Claim	4 32	
69669—Car repairs	31 66	
70643— " "	16 49	
71341— " "	2 09	
71646— " "	42 59	
71480—Car service balance	21 00	
		$669 87

Canada Metal Co., Limited, Toronto, Ont.

63811—Metals	$81 23	
64466—Babbitt and solder	45 28	
64715—Lead pipe	14 41	
65281—Metal	161 91	
65415—Babbitt	200 47	
65894—Battery zincs	156 65	
67147—Metals	227 38	
67106—Babbitt, etc.	295 18	
67480—Battery zincs, etc.	230 25	
68101—Pig lead	235 32	
68416—Battery coppers	19 75	
69782— " "	25 00	
70709—Babbitt	62 03	
		$1,754 86

Canadian Asbestos Company, Montreal, Que.

63815—Lagging	$33 14	
64438—Asbestos	126 00	
67172—Asbestos, etc.	109 80	
67494—Air cell covering	42 52	
68087—Asbestos	75 21	
68352—Graphite	18 15	
69257—Lagging	48 27	
69834— "	42 75	
		$495 84

CANADIAN CAR & FOUNDRY COMPANY, LIMITED, MONTREAL, QUE.

63819—Connecting pins, etc	$72 30	
64420—Brake heads	30 00	
65287—Brake heads and lever heads	14 90	
65411—Upholstering springs	43 20	
66074—Iron brakes	37 50	
67158—Brake heads, etc.	127 70	
68093—Castings	7 30	
69615—Brake beams	442 00	
69778— " "	102 00	
69818—Brackets	25 00	
70493—Pins	26 00	
		$927 90

CANADIAN CAR SERVICE BUREAU, MONTREAL, QUE.

63821—Proportion cost operation	$22 68	
64638— " " "	22 38	
65344—Car service rules	75	
65599—Proportion cost operation	32 55	
66486— " " "	32 05	
66601— " " "	32 17	
67254— " " "	27 26	
68252— " " "	32 48	
68816— " " "	31 05	
69557— " " "	27 77	
70198— " " "	31 36	
71167— " " "	42 38	
71332— " " "	30 02	
		$364 90

CANADIAN CONSOLIDATED FELT COMPANY, LIMITED, KITCHENER, ONT.

63823—Felt	$22 50	
64993— "	8 82	
65448— "	21 95	
		$53 27

CANADIAN COTTON & WOOL WASTE COMPANY, MONTREAL, QUE.

63825—Wipers	$52 30	
64186— "	53 98	
64068—Waste	127 74	
64743—Wipers	52 04	
65582—Waste	194 09	
67081— "	253 35	
67520— "	369 35	
		$1,102 85

CANADIAN GENERAL ELECTRIC COMPANY, LIMITED, TORONTO, ONT.

63827—Electrical supplies	$11 56	
64474— " "	68 08	
65293— " "	18 38	
65417— " "	94 12	
65430— " "	211 41	
65454— " "	51 92	
65464— " "	308 65	
65580— " "	37 85	
65732— " "	98 13	
66020— " "	283 12	
66261— " "	79 43	
66597— " "	10 34	
66791— " "	13 26	
67259— " "	102 24	
67108— " "	364 95	
67470— " "	58 52	

CANADIAN GENERAL ELECTRIC COMPANY, LTD., TORONTO, ONT.—*Continued.*

68085—Electric supplies	$75 49	
68428— " "	43 14	
69088— " "	13 98	
69413— " "	259 83	
69611— " "	36 91	
69788— " "	22 02	
70361— " "	13 97	
70689— " "	7 82	
71056— " "	34 27	
71206—Claim No. 16036, overcharge express electric locomotive	7 93	
71286—Electrical supplies	24 55	
		$2,351 87

CANADIAN FAIRBANKS-MORSE COMPANY, LIMITED., TORONTO, ONT.

63829—Drill bits, etc.	$110 71	
64295—Track drills	122 00	
64440—Springs, screws, etc.	45 42	
65279—Dicks Balata belt, etc.	147 00	
65407—Battery renewals, etc.	99 58	
66030—Buffing bricks	43 50	
66519—Piston rings, etc	147 11	
67143—Scale cards	27 50	
67217—Balata belt	225 00	
67154—Edison cells	1,327 00	
67458—Repairs to magneto	6 35	
68095—Motor, etc.	422 73	
68746—Iron hoops	855 45	
69259—Valve, etc	18 07	
69565—Balata belt	285 00	
69621—Velocipedes	322 00	
69784—Valves, etc.	73 55	
70527—Lockport, etc.	74 76	
70545—Drive gear	29 69	
70687—Ratchet, etc.	133 94	
71064—Pipe, etc.	228 67	
		$4,745 03

CANADIAN PACIFIC RAILWAY COMPANY'S TELEGRAPH.

63831—Telegraph service	$6 28
63937— " "	11 44
64655—Telegraph interchange balance	885 58
63974—Telegraph service	14 69
64126— " "	2 44
65062— " "	5 57
65380—Telegraph interchange balance	631 00
64881—Telegraph service	20 73
65107— " "	17 83
66153—Telegraph interchange balance	658 68
65604—Telegraph service	5 57
66012— " "	10 86
66624— " "	38 65
66638—Telegraph interchange balance	425 62
66595—Telegraph service	40 54
67589— " "	7 86
67617—Telegraph interchange balance	676 50
67266—Telegraph service	33 14
67514— " "	1 72
67926—Telegraph interchange balance	783 11
68299—Telegraph service	11 77
68301— " "	6 57
68811—Telegraph interchange balance	684 05
68576—Telegraph service	1 14
68832— " "	41 52
69128—Telegraph interchange balance	648 90
68977—Telegraph service	17 67
69489— " "	5 56

CANADIAN PACIFIC RAILWAY COMPANY'S TELEGRAPH.—*Continued.*

69963—Telegraph service	$1 35	
69963— " "	1 35	
70075—Telegraph interchange balance	768 40	
69534—Telegraph service	14 82	
69910— " "	7 37	
70060— " "	3 61	
70192— " "	12 85	
70526— " "	5 90	
70540—Telegraph interchange balance	907 51	
70555—Telegraph service	12 16	
70655— " "	6 62	
71171— " "	13 41	
71369— " "	3 19	
71391*a*—Telegraph interchange balance	692 46	
71186—Telegraph service	21 18	
71188— " "	26 99	
71704—Telegraph interchange balance	479 09	
71334—Telegraph service	6 63	
		$8,678 53

CANADIAN STEEL FOUNDRIES, LIMITED, MONTREAL, QUE.

63833—Tower clevis, etc.	$71 26	
64432—Tower levers	10 00	
65425—Couplers	154 00	
66257—Tower lock sets	60 80	
67156—Couplers, etc.	175 00	
67552— "	152 96	
68309— "	1,017 19	
68350— "	59 10	
69251—Lock sets	1 70	
69619—Couplers	553 13	
69816—Tower clevises	14 00	
70715—Couplers	319 88	
71036— "	1,069 50	
		$3,658 52

CANADIAN WESTINGHOUSE COMPANY, LIMITED, HAMILTON, ONT.

63835—Air brake material	$25 54	
64016— " "	42 52	
64444— " "	159 70	
65275—Electric lamps, etc.	144 03	
65317—Air brake material	124 09	
65948— " "	160 98	
66235—Transformers	1,125 36	
67253—Air brake material	234 38	
66942—Gaskets, etc.	180 73	
67466— "	235 35	
67973—Motors, etc.	1,100 87	
68089— "	236 00	
68306—Air brake material	153 94	
69237— " "	548 30	
69623— " "	253 22	
69832—Motor	533 02	
70529—Air brake material	71 51	
70695—Motor, etc.	315 41	
71030—Brake equipment, etc.	4,381 05	
		$10,026 00

CANADIAN WM. A. ROGERS, LIMITED, TORONTO, ONT.

63837—Silverware	$14 84	
63976— "	25 00	
64434— "	5 50	
65321— "	12 65	
67120— "	4 00	
69617— "	12 20	
71296— "	5 75	
		$79 94

CANUCK SUPPLY COMPANY, LIMITED, MONTREAL, QUE.

63839—Paint	$17 50	
64426— "	17 50	
65289— "	15 05	
66008— "	14 70	
68344—Packing	7 80	
68992—Castings	24 00	
70705—Paint	13 65	
		$110 20

THE CARBORUNDUM COMPANY, NIAGARA FALLS, N.Y.

63841—Alox wheels	$10 60	
66010—Grinding wheels	16 58	
		$27 18

CONSOLIDATED CAR-HEATING COMPANY, ALBANY, N.Y.

63845—Hose clamps	$63 16	
64422—Diaphragms	13 75	
66078—Hose clamps and gaskets	117 59	
		$194 50

CANADIAN EXPRESS COMPANY.

64043—Express charges	$33 76	
64898— " "	26 83	
66155— " "	51 32	
66572— " "	37 12	
66809— " "	1 40	
67615— " "	39 27	
67364—Refund of amount overpaid—rental Timmins Station	70 00	
67928—Express charges	60 48	
68564— " "	25 17	
69183— " "	30 32	
70049— " "	31 78	
70200— " "	35 12	
70901— " "	19 31	
70626— " "	82 70	
71610— " "	36 25	
		$580 83

CHARLTON-ENGLEHART LIGHT & POWER COMPANY, CHARLTON, ONT.

64045—Current supplied	$4 20	
64657— " "	128 83	
64902— " "	86 73	
64962— " "	5 10	
65553— " "	58 19	
65811— " "	4 50	
66484— " "	60 72	
66593— " "	3 20	
67527— " "	3 10	
67587— " "	60 77	
67586— " "	31 35	
		$446 69

CHICAGO, MILWAUKEE & ST. PAUL RAILWAY COMPANY, CHICAGO, ILL.

64047—Tariffs	$4 19
65809—Car repairs	12 87
65895—Car service balance	62 25
65660—Cars destroyed by fire of July, 1916	1,842 82
65792—Car repairs	87 62
66610— "	13 46
66807— "	15 35
67059— "	11 63

CHICAGO, MILWAUKEE & ST. PAUL RY. CO.—*Continued.*

67858—Ticket balance	97	
67902—Car repairs	5 62	
68473— "	7 48	
68795—Ticket balance	34 37	
68602—Car repairs	5 05	
69663— "	8 03	
69662— "	22 26	
		$2,133 97

THE COPELAND-CHATTERSON COMPANY, LIMITED, BRAMPTON, ONT.

64227—Stationery supplies	$4 00	
66193— " "	65 87	
66694— " "	5 50	
71008— " "	2 10	
		$77 47

CHICAGO & ALTON RAILWAY, CHICAGO, ILL.

64353—Ticket balance	$ 75	
65016—Car repairs	46	
65110—Car service balance	6 30	
65863— " "	13 05	
65923—Car repairs	11 92	
65602— "	46	
66256—Car service balance	11 25	
66426—Ticket balance	9 92	
66911—Car repairs	3 45	
67052— "	2 38	
67680—Car service balance	12 00	
68645— " "	22 00	
68212—Car repairs	44	
69164—Car service balance	7 90	
70330—Car repairs	49	
71331— "	26 96	
71644— "	3 68	
		$133 41

CHICAGO, ROCK ISLAND & PACIFIC RAILWAY COMPANY, CHICAGO, ILL.

64357—Ticket balance	$118 29	
64393—Car service balance	41 40	
64190—Car repairs	86 94	
65012— "	7 58	
65116—Car service balance	15 75	
65213—Claim	7 74	
65891—Car service balance	81 60	
65686—Claim	9 97	
65750—Car repairs	11 49	
66088—Claim	6 27	
66282—Car service balance	3 75	
66626—Car repairs	35 22	
66455—Claims	11 08	
67277—Car service balance	3 00	
67481—Ticket balance	7 50	
67678—Car service balance	2 25	
68981—Car repairs	26 07	
69807—Car service balance	1 80	
69833— " " "	21 00	
70094—Car repairs	130 83	
70376—Car service balance	3 00	
70943— " "	33 00	
71297—Claims	15 15	
71339—Car repairs	100 58	
71472—Car service balance	1 80	
71654—Car repairs	49 30	
		$832 36

CHICAGO, PEORIA & ST. LOUIS RAILWAY OF ILLINOIS, SPRINGFIELD, ILL.

64385—Car service balance	$2 25	
64226—Car repairs	1 85	
65112—Car service balance	90	
66284— " "	9 75	
67279— " "	25 50	
69567—Car repairs	2 12	
69813—Car service balance	45	
70939— " "	6 60	
71468— " "	1 20	
		$50 62

CHICAGO & EASTERN ILLINOIS RAILROAD, CHICAGO, ILL.

64387—Car service balance	$14 85	
64182—Car repairs	2 22	
65144—Car service balance	2 25	
65306—Car destroyed by fires, July, 1916	367 48	
65799—Car repairs	1 24	
65893—Car service balance	24 75	
65814—Car repairs	3 27	
66254—Car service balance	7 50	
66813—Car repairs	10 82	
67904— " "	1 31	
68137— " "	13 38	
68659—Car service balance	6 00	
68224—Car repairs	14 38	
69166—Car service balance	23 40	
69815— " " "	1 20	
70098—Car repairs	21 66	
71105— " "	25	
70780— " "	3 87	
		$519 83

COLORADO & SOUTHERN RAILWAY CO., DENVER, COL.

64389—Car service balance	$4 05	
65138— " " "	1 80	
65747—Car destroyed in forest fires of July, 1916	444 30	
66304—Car service balance	11 25	
67301— " " "	13 35	
68379—Car repairs	1 65	
70412—Car service balance	60	
70784—Car repairs	6 70	
		$483 70

CENTRAL RAILROAD CO. OF NEW JERSEY, NEW YORK, N.Y.

64391—Car service balance	$35 10	
64192—Car repairs	4 40	
65114—Car service balance	27 90	
66286— " " "	32 25	
66570—Car repairs	20 51	
67281—Car service balance	81 75	
67682— " " "	15 75	
68661— " " "	102 75	
68692—Car repairs	34	
69817—Car service balance	23 40	
70186—Car repairs	10 01	
70378—Car service balance	37 20	
70941— " " "	52 20	
71335—Car repairs	4 52	
71642— " "	13 74	
71470—Car service balance	25 40	
		$487 22

CENTRAL OF GEORGIA RAILWAY, SAVANNAH, GA.

64395—Car service balance	$28 80	
65120— " " "	9 45	
65887— " " "	27 60	
66022—Car repairs	1 19	
66290—Car service balance	75	
67684— " " "	30 00	
67804—Car repairs	33	
68663—Car service balance	7 50	
69172— " " "	4 40	
69819— " " "	1 80	
70380— " " "	3 30	
70945— " " "	3 45	
71103—Car repairs	12 56	
71638— " "	1 36	
71474—Car service balance	3 00	
		$135 49

CHESAPEAKE & OHIO RAILWAY, RICHMOND, VA.

64397—Car service balance	$37 75	
64599—Car repairs	5 36	
65124—Car service balance	60 30	
65919—Car repairs	30	
65754— " "	2 92	
66292—Car service balance	96 75	
66805—Car repairs	62	
67285—Car service balance	111 75	
67808—Car repairs	12 70	
68399— " "	4 85	
68653—Car service balance	3 75	
69665—Car repairs	3 37	
70641— " "	9 50	
70947—Car service balance	40 80	
71095—Car repairs	3 69	
71648— " "	8 46	
71476—Car service balance	31 30	
		$434 17

CENTRAL VERMONT RAILWAY, ST. ALBANS, VT.

64399—Car service balance	$35 10	
64593—Car repairs	11 48	
64200— " "	5 27	
65126—Car service balance	48 15	
65302—Car destroyed by fires, July, 1916	833 59	
65885—Car service balance	72 75	
66294— " " "	18 60	
67287— " " "	27 25	
67686— " " "	49 50	
68665— " " "	78 00	
68468—Car repairs	1 25	
69174—Car service balance	10 20	
69609—Car repairs	1 82	
69821—Car service balance	55 80	
70382— " " "	41 40	
70949— " " "	40 20	
71586—Ticket balance	5 98	
71478—Car service balance	21 60	
		$1,357 94

CHICAGO GREAT WESTERN RAILROAD, CHICAGO, ILL.

64401—Car service balance	$13 95	
64196—Car repairs	1 82	
65132—Car service balance	23 85	
65879— " " "	22 35	
66318— " " "	19 50	

CHICAGO GREAT WESTERN RAILROAD, CHICAGO, ILL.—*Continued.*

67293—Car service balance	$24 00	
67054—Car repairs	3 13	
67690—Car service balance	26 80	
68139—Car repairs	1 05	
68669—Car service balance	50 25	
69176— " " "	6 15	
69625—Car repairs	65	
69823—Car service balance	60	
70384— " " "	3 00	
		$197 10

CAROLINA, CLINCHFIELD & OHIO RAILWAY, JOHNSON CITY, TENN.

64403—Car service balance	$14 85	
65134— " " "	3 15	
65877— " " "	2 85	
66298— " " "	1 80	
67295— " " "	14 25	
67692— " " "	8 25	
68671— " " "	6 00	
69178— " " "	3 00	
68979—Car repairs	2 60	
69825—Car service balance	7 20	
69664—Car repairs	12 55	
70951—Car service balance	4 60	
71482— " " "	3 00	
		$84 10

CHICAGO & NORTHWESTERN RAILWAY, CHICAGO, ILL.

64407—Car service balance	$4 05	
65136— " " "	18 00	
65304—Car destroyed by fires, July, 1916	419 19	
66119—Car service balance	88 05	
65788—Car repairs	9 52	
66026— " "	18 92	
66300—Car service balance	14 25	
67297— " " "	68 40	
67593—Car destroyed by fire of July, 1916	363 23	
67096—Car repairs	75 37	
68649—Car service balance	48 30	
68226—Car repairs	48 06	
69180—Car service balance	130 65	
69827— " " "	47 95	
70410— " " "	59 00	
71097—Car repairs	31 38	
		$1,444 32

CHICAGO, ST. PAUL, MINNEAPOLIS & OMAHA RAILWAY, ST. PAUL, MINN.

64409—Car service balance	$6 80	
64595—Car repairs	8 37	
65873—Car service balance	74 40	
65748—Car repairs	8 92	
66302—Car service balance	39 00	
66913—Car repairs	2 60	
67299—Car service balance	1 05	
67971—Car repairs	78	
68673—Car service balance	8 50	
68804—Car repairs	49	
69182—Car service balance	75	
69569—Car repairs	4 56	
69829—Car service balance	24 60	
70386— " " "	28 80	
70953— " " "	9 85	
71484— " " "	11 40	
		$230 87

CHICAGO, INDIANAPOLIS & LOUISVILLE RAILWAY, CHICAGO, ILL.

64411—Car service balance	$47 70	
64591—Car repairs	1 51	
64230— " "	1 63	
65140—Car service balance	26 10	
65869— " " "	54 15	
66306— " " "	15 70	
67303— " " "	5 25	
67694— " " "	60	
68651— " " "	3 00	
68672—Car repairs	36	
69184—Car service balance	60	
69831— " " "	2 40	
70102—Car repairs	7 26	
71636— " "	13 14	
		$179 40

CENTRAL NEW ENGLAND RAILWAY, NEW HAVEN, CONN.

64413—Car service balance	$21 15	
65142— " " "	3 60	
65867— " " "	1 95	
66308— " " "	75	
67305— " " "	18 00	
67696— " " "	2 25	
69759—Car repairs	1 91	
70096— " "	6 56	
71101— " "	1 30	
71486—Car service balance	6 60	
		$64 07

COTTON BELT ROUTE, TYLER, TEXAS.

64419—Car service balance	$23 40	
66115— " " "	21 60	
66314— " " "	21 75	
67311— " " "	21 00	
67698— " " "	27 75	
68655— " " "	21 25	
		$136 75

CHICAGO, NEW YORK & BOSTON REFRIGERATOR CO., CHICAGO, ILL.

64421—Car service balance	$9 50	
65152— " " "	2 07	
65865— " " "	1 90	
66316— " " "	1 72	
67313— " " "	1 90	
69188— " " "	3 79	
		$20 88

COCHRANE STEAM LAUNDRY COMPANY, COCHRANE, ONT.

64557—Laundry	$18 54	
64640— "	24 89	
65547— "	2 21	
66482— "	41 75	
67541— "	24 60	
67252— "	19 16	
68204— "	19 29	
69054— "	20 55	
70292— "	42 86	
71383— "	19 02	
		$232 87

WM. CAMERON, ST. LOUIS, MO.

64559—Tariffs	$3 04	
65555— "	5 60	
66970— "	10 44	
68664— "	9 32	
71190— "	17 49	
		$45 89

CENTRAL FREIGHT ASSOCIATION, CHICAGO, ILL.

64561—Tariffs	$1 65	
64188—Rate group map	2 75	
64130—Tariffs	36	
65595— "	30	
66034— "	1 05	
67121— "	1 45	
67518— "	2 00	
68502— "	45	
70031— "	3 09	
71371— "	79	
		$13 89

CINCINNATI, INDIANAPOLIS & WESTERN RAILROAD CO., INDIANAPOLIS, IND.

64589—Car repairs	$1 91	
65154—Car service balance	90	
66117— " " "	18 15	
66320— " " "	6 75	
67049—Car repairs	3 38	
67315—Car service balance	12 45	
67042—Car repairs	1 00	
68397— " "	91	
68679—Car service balance	8 25	
69730—Car repairs	54	
70390—Car service balance	3 00	
70967— " " "	1 20	
71494— " " "	6 00	
		$64 44

CORPORATION OF THE TOWN OF NORTH BAY, NORTH BAY, ONT.

64661—Water supplied	$294 78	
64900— " "	234 15	
64943—Water rates	12 75	
65603—Water supplied	365 12	
66450— " "	285 53	
67585— " "	303 66	
67554— " "	289 94	
68343— " "	231 00	
69118— " "	371 07	
69555— " "	237 44	
69974— " "	270 83	
70679— " "	264 25	
71344— " "	278 74	
71606—Water rates	38 25	
		$3,477 51

CANADIAN SHOVEL & TOOL COMPANY, LTD., HAMILTON, ONT.

63888—Shovels	$46 92	
64918— "	82 32	
66773— "	138 90	
67699— "	216 04	
		$484 18

CANADIAN LOCOMOTIVE COMPANY, LIMITED, KINGSTON, ONT.

63980—Draw bars	$156 00	
65285—Boyer speed recorder	85 15	
67146—Castings, etc.	102 06	
68251—Brake hangers	120 00	
70495—Rings	220 00	
70703—Gaskets	30 00	
		$713 21

CANADIAN DETROIT LUBRICATOR CO., LIMITED, WALKERVILLE, ONT.

64008—Lubricator	$10 89	
64478—Repairs to lubricator	8 83	
67947—Rubber packing	5 72	
68023—Lubricator	8 56	
70699—Oilers	100 00	
70594—Repairs	22 61	
		$156 61

THE CONSOLIDATED STAMP MFG. COMPANY, NEW YORK, N.Y.

64014—Rubber stamp	$ 56	
		$ 56

CHICAGO CAR HEATING CO., MONTREAL, QUE.

64018—Locking bolts and springs	$7 50	
65423—Steam hose gaskets	12 50	
67157—Traps, bolts, etc.	65 33	
67118—Y fittings	7 50	
		$92 83

THE TOWN OF COCHRANE, COCHRANE, ONT.

64128—Water supplied	$200 52	
69707— " "	26 69	
		$227 21

CLEVELAND, CINCINNATI, CHICAGO & ST. LOUIS RY. CO., CINCINNATI, OHIO.

64198—Car repairs	$19 94	
64961—Claim	10 00	
65904—Car repairs	31 69	
67349— " "	42 90	
67860—Ticket balance	2 95	
68389—Car repairs	1 28	
69671— " "	25 06	
71093— " "	19 24	
71652— " "	5 83	
		$158 89

B. J. COGHLIN COMPANY, LIMITED, MONTREAL, QUE.

64424—Chain and springs	$9 30	
65401—Springs	18 00	
66080—Springs, etc.	65 64	
67155—Wrecking chains	284 39	
67596—Coupler springs, etc.	154 54	
68091—Coupler springs	192 50	
68348—Crain chain	7 52	
69249—Coupler springs	210 00	
69780—Tail pockets, etc.	462 50	
70717—Springs	98 56	
71068— "	38 16	
		$1.541 11

CANADIAN PNEUMATIC TOOL COMPANY, LIMITED, MONTREAL, QUE.

64428—Repairs to drills	$32 96	
67014—Chippers	126 00	
69794—Belting, etc.	3 55	
71052—Repairs to speed recorder	28 68	
71294—Bits	21 00	
		$212 19

CANADIAN RAMAPO IRON WORKS, LIMITED, NIAGARA FALLS, ONT.

64430—Switch material	$118 50	
65331— " "	592 60	
65403— " "	6 00	
66076— " "	2,315 00	
67159— " "	9 00	
67454— " "	1,682 50	
68287— " "	1,335 00	
68288— " "	220 20	
69263— " "	1,309 00	
69705— " "	550 00	
69836— " "	546 60	
70681— " "	6,780 00	
71060— " "	3,205 00	
		$18,669 40

CANADIAN BLOWER & FORGE COMPANY, LTD., KITCHENER, ONT.

64468—Stationary forge	$69 00	
		$69 00

CANADA GRIP NUT COMPANY, LTD., MONTREAL, QUE.

64470—Grip nuts	$6 57	
67145— " "	68 83	
67144— " "	26 93	
68410— " "	38 13	
71034— " "	32 95	
		$173 41

L. C. CHASE & COMPANY, BOSTON, MASS.

64472—Plush	$6 68	
66255— "	85 34	
		$92 02

CANADIAN ALLIS-CHALMERS, LIMITED, TORONTO, ONT.

64476—Pipe	$114 60	
65327—Castings	137 40	
66950—Steel treads	209 50	
67472— " "	37 37	
68346—Turntable parts	118 00	
70489—Beams, etc.	71 42	
		$688 29

E. A. COLE & COMPANY, MONTREAL, QUE.

64686—Claim No. 13007, loss paper	$94 29	
		$94 29

BERNARD CAIRNS, TORONTO, ONT.

64784—Stamps	$2 75	
66684- Daters	2 75	
71151—Stamps	50	
		$6 00

S. Charette, North Cobalt, Ont.

64800—Claim No. 12402, loss flour	$6 45	
		$6 45

Canadian Explosives, Limited, Montreal, Que.

64802—Claim No. 13350, overcharge, explosives	$11 22	
66413— " 13372, loss in fire, explosives	63 00	
69141— " 15456, overcharge on explosives	3 00	
		$77 22

Coniagas Mines, Limited, Cobalt, Ont.

64804—Claim No. 13289, loss catsup	$ 54	
		$ 54

Campbell Flour Mills Company, Limited, Toronto, Ont.

64806—Claim No. 13009, loss flour, etc.	$15 05	
		$15 05

Canadian Milk Products, Limited, Toronto, Ont.

64808—Claim No. 13061, loss milk	$95 17	
66820— " 14016, loss milk	1 50	
		$96 67

Clarke & Lounsbury, North Bay, Ont.

64810—Claim No. 13057, demurrage	$1 00	
66106—Cedar poles	10 50	
69642— "	8 00	
		$19 50

The Charles Ciceri Company, Limited, Toronto, Ont.

64890—Claim No. 13241, loss canned goods	$59 00	
		$59 00

The Cobalt Water Commission, Cobalt, Ont.

64920—Water supplied engines	$8 40	
66237— " "	8 40	
67597— " "	9 45	
67516— " "	11 55	
68283— " "	9 45	
68798— " "	7 35	
69487— " "	6 60	
70294— " "	2 03	
		$63 23

Canadian Stewart Company, Limited, Toronto, Ont.

64958—Claim No. 13366, loss contractor's outfit	$4,161 57	
67325—Refund deposit on siding, Matheson	622 05	
68824—Claim No. 15264, loss tools, etc.	418 94	
69987—Claim No. 13877, damage to roofing	105 15	
		$5,307 71

S. J. Cherry, North Bay, Ont.

64964—Plumbing	$6 73	
65549— "	5 73	
67549— "	14 30	
69135— "	27 89	
71608— "	2 25	
		$56 90

COCHRANE SHEET METAL & CORNISH WORKS, COCHRANE, ONT.

65002—Repairs to heating system in passenger depot, Cochrane..	$1 00	
		$1 00

C. D. CHATTERTON, IROQUOIS FALLS, ONT.

65004—Expenses	$4 50	
66157— "	79 45	
		$83 95

CHICAGO, ROCK ISLAND & GULF RAILWAY CO., FORT WORTH, TEXAS.

65006—Car repairs	$1 06	
68710— "	43 21	
71337— "	72	
71466—Car service balance	2 40	
		$47 39

THE CANADIAN H. W. JOHNS-MANVILLE COMPANY, LIMITED, TORONTO, ONT.

65058—Repairs to car "Temagami"	$10 15	
64991—Waterproof cement	75	
68067—Wire belt	4 63	
70569—Pipe covering	164 16	
71367—Repairs car "Temagami"	9 55	
		$189 24

E. CHURCH, ENGLEHART, ONT.

65064—Cartage	$5 50	
69077— "	1 00	
		$6 50

COAL & COKE RAILWAY, ELKINS, W. VA.

65122—Car service balance	$ 45	
65875— " "	4 05	
		$4 50

CINCINNATI, HAMILTON & DAYTON RAILWAY, CINCINNATI, OHIO.

65128—Car service balance	$8 55	
65308—Car destroyed by fire, July, 1916	780 27	
65797—Car repairs	1 22	
65883—Car service balance	5 30	
65812—Car repairs	36 25	
66663— "	1 33	
67289—Car service balance	21 75	
67475—Ticket balance	8 10	
68395—Car repairs	68	
68667—Car service balance	21 75	
68470—Car repairs	58	
69439— "	64 09	
69660— "	2 64	
71333— "	1 45	
		$953 96

CHICAGO, TERRE HAUTE & SOUTHEASTERN RAILWAY COMPANY, CHICAGO, ILL.

65146—Car service balance	$6 30	
66310— " "	11 25	
67307— " "	1 00	
68675— " "	9 00	
70388— " "	1 20	
70955— " "	6 60	
		$35 35

C. Celestine, North Bay, Ont.

65336—Award, W. C. B. *re* alleged injuries	$37 35	
		$37 35

Central Railway Signal Company, Iberville, Que.

64813—Fusees	$123 48	
65295—Torpedoes	25 00	
66016—Fusees and torpedoes	232 00	
67085— " "	372 00	
		$752 48

Cleveland Copper Ferrule Company, Cleveland, Ohio.

64889—Copper	$33 38	
67456—Copper Ferrules	107 50	
68310— " "	246 83	
70693— " "	294 67	
		$682 38

W. Clarke, Limited. Montreal, Que.

65047—Claim No. 13302, loss canned goods	$11 73	
		$11 73

Canadian Railway and Marine World, Toronto, Ont.

65083—Subscriptions	$28 00	
		$28 00

W. C. Cripps, North Bay, Ont.

65121—Expenses	$11 05	
65452— "	8 45	
67723—Award, W. C. B., *re* alleged injuries	15 55	
		$35 05

Cain Coal Company, North Cobalt, Ont.

65159—Ties	$150 00	
68391—Claim No. 12288, damage to joiner's work	6 00	
68946—Ties	30 00	
		$186 00

Connelly Bros., Elk Lake, Ont.

65159—Ties	$92 10	
		$92 10

Donald Connelly, Elk Lake, Ont.

65159—Ties	$577 81	
66106— "	553 82	
68065— "	334 10	
		$1,465 73

M. Coroluk, North Bay, Ont.

65253—Expenses	$2 35	
		$2 35

CANADIAN GOLD CAR HEATING & LIGHTING COMPANY, LIMITED, MONTREAL, QUE.

65277—Diaphragms	$32 01	
65445—Steam hose parts	202 65	
67135—Steam traps	71 50	
67177—Diaphragms	46 20	
71066—Valves	66 36	
		$418 72

CANADIAN OFFICE SCHOOL FURNITURE COMPANY, LIMITED, PRESTON, ONT.

65283—Hooks, etc.	$ 83	
		$ 83

THE CHAS. CHAPMAN CO., LONDON, ONT.

65291—Stationery supplies	$12 00	
66032— " "	50 50	
66591— " "	66 25	
67110— " "	43 50	
68097— " "	61 30	
69271— " "	32 25	
69559— " "	97 70	
69814— " "	98 85	
70701— " "	30 00	
71290— " "	20 00	
		$512 35

CHARCOAL SUPPLY COMPANY, TORONTO, ONT.

65297—Charcoal	$34 63	
66084— "	24 09	
68358— "	36 25	
69261— "	25 50	
70491— "	21 50	
		$141 97

THE W. H. COE MANUFACTURING COMPANY, PROVIDENCE, R.I.

65319—Ribbon gold and aluminum	$56 84	
65405— " " "	28 32	
68079— " " "	129 03	
69265— " " "	52 19	
		$266 38

THE CURTAIN SUPPLY COMPANY, CHICAGO, ILL.

65329—Curtains	$86 80	
67134— "	16 50	
70713— "	119 70	
71070— "	32 40	
		$255 40

W. H. COX COAL COMPANY, LIMITED, TORONTO, ONT.

65377—Coal	$589 62	
		$589 62

A. E. CAMPBELL, COBALT, ONT.

65413—Coal	$14 50	
		$14 50

COALE MUFFLER & SAFETY VALVE COMPANY, BALTIMORE, MD.

65427—Motor gauge	$2 50	
		$2 50

F. T. Cade, North Bay, Ont.

65443—Expenses	$5 00	
		$5 00

Canadian Forestry Association, Ottawa, Ont.

65551—Membership fee	$1 00	
66463—Subscriptions	9 00	
67132— "	2 00	
68160—Membership fee	1 00	
		$13 00

H. V. Cartwright, Matheson, Ont.

65653—Claim No. 13087, loss seeds in fire	$39 75	
69179— " 14264, loss raisins	3 36	
		$43 11

Norman Child, Matheson, Ont.

65651—Claim No. 13446, refund on lumber *re* fire sufferers	$13 32	
		$13 32

David Clutchey, Haileybury, Ont.

65685—Electric wiring Matheson station	$262 99	
		$262 99

Campbell & Deyell, Limited, Cobalt, Ont.

65717—Rebates on private sidings	$60 28	
65761—Claim No. 11619, overcharge silver ore	26 47	
66840—Claims Nos. 11621 and 11618, overcharge silver ore	119 37	
		$206 12

Canadian Independent Telephone Co., Toronto, Ont.

65815—Membership fee	$5 00	
		$5 00

Charleston & Western Carolina Railway, Wilmington, N.C.

65871—Car service balance	$ 90	
		$ 90

Cambria & Indiana Railroad Company, Philadelphia, Pa.

65921—Car service balance	$4 50	
66322— " " "	9 00	
71496— " " "	1 20	
		$14 70

The Cincinnati, Lebanon & Northern Ry. Co., Philadelphia, Pa.

65927—Car repairs	$ 19	
		$ 19

Cleveland & Buffalo Transit Company, Cleveland, O.

65977—Ticket balance	$1 10	
		$1 10

Canadian Western Lumber Company, Limited, Fraser Mills, B.C.

65466—Fir timber	$167 57	
		$167 57

R. T. Connell, Englehart, Ont.

65536—Award W. C. B. *re* alleged injuries	$37 47	
65890— " " " "	24 98	
66299— " " " "	24 98	
66627— " " " "	24 98	
66770— " " " "	24 98	
66936— " " " "	24 98	
67685— " " " "	21 40	
67995— " " " "	450 00	
		$633 77

Canadian Pulp & Lumber Co., Ltd., Latchford, Ont.

65540—Refund balance deposit on siding	$2 06	
65714—Claim No. 13292, overcharge on pulpwood	21 51	
67907—Refund balance deposit on siding	225 00	
68390—Claim No. 14474, damage to grinder wheel	10 15	
70607— " 15834, loss of liquid	9 19	
		$267 91

Cobalt Foundry, Cobalt, Ont.

65684—Claim No. 13054, damage to pump	$24 95	
		$24 95

Chicago Junction Railway Co., Chicago, Ill.

65752—Car repairs	$127 98	
66811— " "	4 34	
67565— " "	11 39	
71650— " "	70	
		$144 41

Cochrane Telephone Company, Limited, Cochrane, Ont.

65816—Telephone rental	$8 47	
69056— " "	17 50	
		$25 97

Wm. Comrie, North Bay, Ont.

65918—Travelling expenses	$9 10	
66539— " "	22 75	
66890— " "	15 25	
		$47 10

F. Condre, North Bay, Ont.

65950—Award W. C. B. *re* alleged injuries	$11 09	
		$11 09

Cochrane Northland Post, Cochrane, Ont.

66480—Advertising	$2 00	
67152— "	57 60	
67404— "	31 50	
		$91 10

The Courier Printing Company, Englehart, Ont.

66568—Advertising	$4 32	
67402— "	26 40	
		$30 72

The Copp Clark & Company, Ltd., Toronto, Ont.

66263—Canadian Almanac	$1 00	
		$1 00

MUNICIPALITY OF THE TOWN OF COBALT, COBALT, ONT.

66303—Grant for general purposes, municipality	$600 00	
66732— " " " "	600 00	
70988— " " " "	600 00	
		$1,800 00

THE WM. CANE & SONS, COMPANY, LIMITED, NEWMARKET, ONT.

66307—Pencils	$8 82	
67082— "	17 64	
68896— "	9 00	
70718— "	35 28	
		$70 74

CARBONUM COMPANY, LIMITED, TORONTO, ONT.

66309—Carbon paper	$24 50	
66952— " "	49 78	
68112— " "	24 50	
68894— " "	25 00	
68889— " "	49 00	
70691— " "	25 00	
		$197 78

CAMEL COMPANY, CHICAGO, ILL.

66355—Hangers and rollers	$14 40	
67462—Rollers	7 50	
		$21 90

EDWARD CAMPBELL, ENGLEHART, ONT.

66465—Wood	$18 00	
		$18 00

CARTER'S TESTED SEEDS, INC., TORONTO, ONT.

66517—Bone meal, etc.	$13 50	
		$13 50

THE CATHOLIC REGISTER, TORONTO, ONT.

66669—Advertising	$10 00	
		$10 00

CROUSE-HINDS COMPANY OF CANADA, LIMITED, TORONTO, ONT.

66671—Condulets	$22 01	
66793— "	79 14	
68919— "	49 26	
69486— "	8 20	
70241— "	84 39	
		$243 00

CANADIAN INGERSOLL RAND COMPANY, LIMITED, MONTREAL, QUE.

66883—Claim No. 13519, loss of drill parts	$546 60	
		$546 60

E. J. CONROY, NEW LISKEARD, ONT.

67019—Claim No. 13836, damage to organ	$10 00	
		$10 00

CREOSOTED BLOCK PAVING COMPANY, LIMITED, TORONTO, ONT.

66696—Paving blocks	$630 00	
		$630 00

CANADA IRON FOUNDRIES, LIMITED, MONTREAL, QUE.

66738—Grate bars and castings	$36 00	
67496—Journal box covers	7 44	
		$43 44

ROLLA L. CRAIN COMPANY, LIMITED, OTTAWA, ONT.

67116—Stationery supplies	$4 42	
68337— " "	1 30	
		$5 72

COBALT REDUCTION COMPANY, LIMITED, COBALT, ONT.

67292—Refund balance deposit on siding	$48 84	
68786—Claim No. 12986, loss filter press parts	35 96	
		$84 80

CLAYBELT PUBLISHING COMPANY, LIMITED, COCHRANE, ONT.

67400—Advertising	$18 00	
69961— "	5 70	
		$23 70

CANADIAN CARBON COMPANY, LIMITED, TORONTO, ONT.

67460—Batteries	$68 75	
69253— "	103 13	
		$171 88

KATHERINE M. CAMERON, TORONTO, ONT.

67619—Services rendered	$55 00	
		$55 00

CANADA FURNITURE MANUFACTURES, LIMITED, WOODSTOCK, ONT.

67683—Cabinets and cards	$67 84	
70551—Springs	53 51	
		$121 35

A. CHAMANDY, COCHRANE, ONT.

67961—Claim No. 13904, refund freight charges a/c fire sufferers..	$25 92	
67963—Claim No. 13904 " " " " ..	181 67	
68393—Lodging furnished engineering party	14 50	
		$222 09

A. L. CHENNETTE, BARBER'S BAY, ONT.

68021—Wood	$139 50	
69045— "	138 80	
70683— "	60 00	
71292— "	34 00	
		$372 30

W. CARMICHAEL, NORTH BAY, ONT.

68169—Travelling expenses	$1 75	
		$1 75

ADELARD COTE, McINTOSH SPRINGS, ONT.

68173—Donation *re* horse killed	$50 00	
68946—Ties	67 64	
		$117 64

N. Casselman, Kenabeek P.O., Ont.

68597—Ties	$171 69	
		$171 69

James Condy, Heaslip, Ont.

68597—Ties	$50 15	
68946— "	20 90	
		$71 05

Howard Crowder, McCool, Ont.

68597—Ties	$24 71	
69642— "	10 30	
		$35 01

Canadian Carbonate Company, Limited, Toronto, Ont.

68613—Claim No. 14655, loss of gas	$109 50	
71208—Claim No. 12656, "	93 75	
		$203 25

Canadian B. K. Morton Company, Limited, Montreal, Que.

68414—Steel	$141 12	
69822— "	172 62	
		$313 74

Felix Cattarello, Cobalt, Ont.

68148—Claim No. 14073, damage to coffee	$1 95	
		$1 95

Frank Cipparone, North Bay, Ont.

68096—Award W. C. B. *re* alleged injuries	$10 54	
		$10 54

Chicago-Cleveland Car Roofing Company, Chicago, Ill.

68766—Metal roofing	$47 50	
		$47 50

D. Stuart Culbert, Dane, Ont.

68442—Claim No. 10879, damage to stove	$10 00	
		$10 00

M. Caraluk, North Bay, Ont.

68309—Travelling expenses	$2 70	
		$2 70

Mrs. A. Chenier, Cobalt, Ont.

69131—Claim No. 14416, loss settler's effects	$10 00	
		$10 00

Central Coal Mining Company, Cleveland, Ohio.

69133—Coal	$1,819 25	
69418— "	8,260 52	
69442—Exchange on voucher	3 77	
		$10,083 54

CANADIAN RAILWAY ASSOCIATION, HAMILTON, ONT.

69139—Fee	$5 00	
		$5 00

J. A. CHATILLION, COBALT, ONT.

69245—Uniforms	$35 00	
		$35 00

CANADIAN NATIONAL CARBON COMPANY, LIMITED, TORONTO, ONT.

69247—Batteries	$ 60	
		$ 60

WILFRID CADIEUX, MONTREAL, QUE.

69255—Climbers	$7 70	
		$7 70

CENTRAL ELECTRIC COMPANY, CHICAGO, ILL.

69301—Electrical supplies	$3 74	
69824— " "	2 64	
		$6 38

A. H. CARR, EARLTON, ONT.

69985—Claim No. 15486, loss chicken feed	$ 65	
		$ 65

CLAYTON & LAMBERT MANUFACTURING COMPANY, DETROIT, MICH.

69448—Burner tubes	$5 06	
		$5 06

CHARLTON AGRICULTURAL SOCIETY, BRENTHA, ONT.

69456—Donation for annual fair	$10 00	
		$10 00

JAS. CATTERELLO, COBALT, ONT.

69568—Claim No. 15359, loss cordial	$1 00	
		$1 00

CONKEY & MURPHY, HAILEYBURY, ONT.

69786—Wood	$24 00	
70196—Beef	2 00	
		$26 00

THE CANADIAN BAG COMPANY, LIMITED, MONTREAL, QUE.

69820—Bags	$15 77	
		$15 77

CITY BANK & TRUST COMPANY, HARTFORD, CONN.

69826—Stationery supplies	$50 00	
		$50 00

CRANE COMPANY, CHICAGO, ILL.

69828—Steam pressure regulator	$25 20	
		$25 20

THE CANADIAN BRIDGE COMPANY, LIMITED, WALKERVILLE, ONT.

69838—Steel sheets $1,357 00 $1,357 00

THOMAS CARROLL, IROQUOIS FALLS, ONT.

69866—Claim No. 13995, loss clothes and stove $25 00 $25 00

THE CANADIAN GAZETTEER PUBLISHING COMPANY, TORONTO, ONT.

70296—Directory $12 50 $12 50

THE CATHOLIC TRUTH SOCIETY, TORONTO, ONT.

70231—Advertising $10 00 $10 00

B. CIPPARONE, NORTH BAY, ONT.

70363—Travelling expenses $5 00 $5 00

JOHN CRAIG, COBALT, ONT.

70421—Claim No. 15810, loss honey $3 90
70660— " 16044, loss honey 3 75 $7 65

JAMES A. COLE, CHARLTON, ONT.

70423—Claim No. 15176, loss burlap $7 50 $7 50

CANADIAN FEATHER & MATTRESS CO., LTD., TORONTO, ONT.

70707—Mattresses $52 50 $52 50

CHICAGO, WEST PULLMAN & SOUTHERN RY. CO., CHICAGO, ILL.

71099—Car repairs ..... $ 75 $ 75

H. W. CRAWFORD, ELK LAKE, ONT.

71153—Refund telephone rental $8 65 $8 65

CANADIAN OIL COMPANIES, LTD., CLEVELAND, O.

71235—Claim No. 12023, loss oil $41 68 $41 68

C. A. CULBERT, SOUTH PORCUPINE, ONT.

70948—Claim No. 14681, loss boots $25 80 $25 80

THE CANADIAN RAILWAY ASSOCIATION FOR NATIONAL DEFENCE, MONTREAL, QUE.

71018—Assessment $86 00 $86 00

THE B. F. CUMMINS COMPANY, CHICAGO, ILL.

71038—Perforator $36 25 $36 25

F. H. Campbell, North Bay, Ont.

71040—Dry goods	$3 50	
		$3 50

M. Clavir, North Bay, Ont.

71042—Dry goods	$2 00	
		$2 00

The Chisholm & Moore Mfg. Co., Cleveland, O.

71062—Hangers, etc.	$18 90	
		$18 90

Hong Chow, Timmins, Ont.

71210—Claim No. 13493, damage to ironing machine	$25 00	
		$25 00

C. O. D. Meat Market, Cochrane, Ont.

71328—Supplies car "Temagami"	$1 35	
		$1 35

Colorado, Midland Railway Co., Denver, Col.

71498—Car service balance	$1 20	
		$1 20

Cincinnati Northern Railroad, Cincinnati, O.

71640—Car repairs	$2 25	
		$2 25

Chicago, Milwaukee & Gary Ry., Rockford, Ill.

70957—Car service balance	$3 60	
71488— " " "	9 00	
		$12 60

Day Sign Company, Toronto, Ont.

63269—Lettering doors	$23 40	
		$23 40

Dominion Glass Company, Limited, Montreal, Que.

63299—Glass	$41 58	
63389—Globes	13 66	
64928—Glass	42 17	
65255—Chimneys, globes, etc.	26 73	
68014—Globes	34 45	
68110—Glass	45 94	
		$204 53

Davie Bros., Earlton, Ont.

63295—Ties	$1,791 56	
64286— "	731 22	
64286— "	20 71	
65159— "	134 40	
		$2,677 89

DOMINION WHEEL & FOUNDRIES, LIMITED, TORONTO, ONT.

63327—Wheels	$1,000 00	
64490—Washers, castings, etc.	112 79	
66126—Castings, etc.	383 51	
68113— " "	93 58	
64083— " "	48 68	
64085— " "	25 73	
64087—Brake hangers, etc.	106 61	
67327—Castings, etc.	397 07	
67598— " "	412 24	
68025— " "	197 69	
68330— " "	224 97	
69092—Express on patterns	90	
69277—Castings, etc.	71 05	
69675— " "	223 72	
69842—Car wheels, etc.	1,747 40	
70733—Castings, etc.	123 86	
71072—Grates, etc.	206 23	
71298—Car wheels	2,992 50	
		$8,368 53

DAVIS & HENDERSON, LIMITED, TORONTO, ONT.

63387—Books	$82 50	
65381— "	30 00	
67751— "	57 50	
		$170 00

DOMINION ENVELOPE COMPANY, LIMITED, TORONTO, ONT.

63441—Envelopes	$59 75	
65333— "	117 25	
66122— "	46 95	
67197— "	17 25	
67164— "	50 80	
67498— "	62 50	
68519— "	129 70	
68898— "	99 06	
69279— "	75 50	
69850— "	85 50	
70497— "	8 50	
71084— "	4 00	
		$756 76

DESPATCH & TRIBUNE, NORTH BAY, ONT.

63455—Stationery supplies	$6 50	
63873— " "	19 00	
63977— " "	3 00	
64022— " "	7 00	
65559— " "	14 50	
66488—Advertising	3 00	
67556— "	16 50	
68454— "	5 40	
69273—Stationery supplies	10 00	
69798—Advertising	50	
70064— "	7 50	
70719— "	9 00	
		$101 90

DELAWARE & HUDSON COMPANY, NEW YORK, N.Y.

63469—Car repairs	$ 26	
64423—Car service balance	15 75	
64605—Car repairs	2 33	
65156—Car service balance	90	
65899— " " "	117 50	
66024—Car repairs	2 38	

DELAWARE & HUDSON COMPANY, NEW YORK, N.Y.—*Continued.*

66324—Car service balance	$148 35	
67037—Car repairs	79	
67317—Car service balance	113 25	
67700— " " "	52 50	
68489—Car repairs	2 10	
68681—Car service balance	61 50	
68797—Ticket balance	3 46	
68694—Car repairs	92	
69136—Ticket balance	40 00	
69190—Car service balance	2 70	
70334—Car repairs	1 33	
70392—Car service balance	16 20	
70504—Ticket balance	9 10	
70969—Car service balance	60 60	
71500— " " "	58 20	
71658—Car repairs	1 91	
		$712 03

DULUTH, SOUTH SHORE & ATLANTIC RAILWAY, MARQUETTE, MICH.

63471—Car repairs	$16 75	
64234— " "	1 18	
64300— " "	7 15	
65756— " "	6 29	
65956— " "	4 68	
66919— " "	7 27	
67058— " "	8 79	
67975— " "	4 04	
68472— " "	14 91	
69666— " "	4 14	
70786— " "	1 30	
		$76 50

DETROIT, TOLEDO & IRONTON RAILROAD COMPANY, DETROIT, MICH.

63473—Car repairs	$9 76	
65952— " "	7 03	
66921— " "	3 85	
67321—Car service balance	7 50	
67363—Car damaged in fire of July 29, 1916	252 83	
67076—Car repairs	7 10	
67838—Car service balance	11 25	
68685— " " "	15 75	
68324—Car repairs	2 05	
68985— " "	14 76	
69843—Car service balance	4 80	
70104—Car repairs	20 66	
70973—Car service balance	6 00	
71107—Car repairs	25	
71504—Car service balance	10 80	
		$374 39

J. M. DEACON, NORTH BAY, ONT.

63497—Registration deed	$1 65	
67065—Fees for revision of titles	4 00	
		$5 65

FRANK W. DUNCAN, NORTH BAY, ONT.

63565—Uniforms	$70[illegible] 50	
65379— "	[illegible]2 00	
66112— "	23 00	
68748— "	766 00	
70723— "	66 00	
		$1,595 50

HERBERT M. DRURY, NEW LISKEARD, ONT.

63595—Award W. C. B. *re* alleged injuries	$67 40	
64728— " " " "	40 17	
		$107 57

DOMINION RADIATOR COMPANY, LIMITED, TORONTO, ONT.

63599—Grates	$18 66	
		$18 66

J. DRINKWATER, COCHRANE, ONT.

63615—Travelling expenses	$10 50	
64108— " "	7 60	
65165— " "	9 60	
65922— " "	5 55	
66038—Claim No. 13880, rebate on freight *re* fire sufferers	4 16	
66547—Travelling expenses	14 50	
66938— " "	11 35	
67881— " "	14 30	
68384— " "	8 95	
69185— " "	6 30	
69640— " "	8 85	
70663— " "	7 00	
70886— " "	10 00	
		$118 66

G. H. DICKSON, NORTH BAY, ONT.

63853—Travelling expenses	$7 00	
65095— " "	8 25	
65662— " "	6 25	
67879— " "	8 50	
68937— " "	13 35	
		$43 35

H. DAY, NORTH BAY, ONT.

63859—Travelling expenses	$20 40	
64352— " "	15 10	
65125— " "	15 45	
65606— " "	14 55	
66781— " "	14 00	
66850— " "	14 40	
67887— " "	11 10	
68590— " "	19 25	
69187— " "	19 50	
69638— " "	11 95	
70317— " "	20 50	
70884— " "	22 30	
		$198 50

G. W. DUNCAN, NORTH BAY, ONT.

63875—Provisions	$2 10	
63985— "	66 70	
64488— "	46 80	
65535— "	61 10	
65431— "	18 00	
67515—Claim No. 14312, loss apples	1 52	
67560—Provisions	83 60	
67809—Claims	17 94	
67855— "	58 63	
67219—Provisions	16 20	
68105— "	129 00	
68349—Claim No. 14759, overcharge on onions	79	
68542—Provisions	35 30	
68996— "	18 75	

G. W. Duncan, North Bay, Ont.—*Continued.*

69275—Provisions	$27 65	
69633— "	45 60	
69844— "	72 00	
70499— "	29 70	
70729— "	7 00	
70952—Claim No. 15965, loss bananas	4 00	
71074—Provisions	58 00	
		$800 38

Delaware, Lackawanna & Western Coal Company, Buffalo, N.Y.

63931—Coal	$479 46	
64634— "	659 11	
65419— "	368 13	
66004— "	681 46	
66963— "	798 40	
67094— "	964 80	
68001— "	743 45	
68670— "	503 05	
69415— "	439 51	
70221— "	520 73	
70329— "	197 32	
70746— "	460 63	
		$6,816 05

Drummond, McCall & Co., Limited, Montreal, Que.

63979—Tubing	$204 92	
64482— "	449 50	
65449— "	841 15	
67195— "	16 50	
67524— "	18 60	
68115— "	437 00	
68544— "	209 36	
69002— "	90 22	
69307— "	43 01	
71082— "	678 23	
		$2,988 49

Dennis Wire & Iron Works Co., Limited, London, Ont.

63981—Wicket grills	$90 00	
		$90 00

Dominion Foundry Supply Company, Limited, Toronto, Ont.

63983—Turntables	$189 75	
65383— "	182 00	
		$371 75

R. E. Dietz Company, New York, N.Y.

63987—Lanterns	$6 00	
70725— "	9 50	
		$15 50

Dominion Brake Shoe Company, Limited, Montreal, Que.

63989—Brake shoes	$802 88	
64486— " "	675 50	
67075— " "	876 30	
67162— " "	1,167 75	
68107— " "	1,215 70	
70727— " "	1,368 28	
		$6,106 41

DOMINION LINENS, LIMITED, GUELPH, ONT.

63991—Roller towels	$27 00	
64480— " "	27 00	
65301— " "	27 10	
67179— " "	29 00	
		$110 10

DELANY & PETTIT, LIMITED, TORONTO, ONT.

63993—Flint paper	$20 36	
65447—Paper and glue	58 17	
67235—Glue, etc.	107 22	
68109—Emery cloth	68 07	
69848—Flint paper	42 29	
		$296 11

HENRY DISSTON & SONS, LIMITED, TORONTO, ONT.

64079—Disston mill bast.	$3 23	
64484—Tools	21 68	
66116—Saws and files	40 25	
67165—Files, etc.	52 25	
68181—Files and hand hacks	78 48	
69635—Saw	1 76	
70735—Blades	8 19	
71076—Files	12 42	
		$218 26

DOMINION EXPRESS COMPANY, NORTH BAY, ONT.

64081—Express charges	$27 75	
64904— " "	23 08	
65749— " "	27 97	
66576— " "	20 03	
67268— " "	34 01	
67930— " "	24 20	
68566— " "	35 36	
68998— " "	32 34	
69722— " "	32 93	
70202— " "	26 91	
70740— " "	26 54	
71612— " "	33 35	
		$344 47

DOME MINES COMPANY, LIMITED, SOUTH PORCUPINE, ONT.

64233—Rebate on private siding	$306 00	
64644— " " "	110 00	
64812—Claim No. 13266, damage to milk	8 00	
64870— " 12464, loss extracts	7 00	
65025— " 11785, damage to perforated liner	5 20	
65719—Rebate on private siding	98 00	
65731—Claim No. 10832, loss coal	38 70	
66580—Rebate on private siding	84 00	
67507— " " "	48 00	
67326—Claim No. 12204, loss steel	16 65	
68432—Rebate on private siding	146 00	
68818— " " "	38 00	
69443—Claim No. 13706, damage to steel liner	10 14	
70204—Rebate on private siding	26 00	
70262—Claim No. 14633, damage to liner casting	9 42	
70777—Rebate on private siding	54 00	
71155— " " "	88 00	
70676—Claim No. 13946, overcharge on goods	79 72	
71020—Rebate, private siding	68 00	
71214—Claim No. 14634, damage to castings	5 02	
		$1,245 85

DOMINION SUGAR COMPANY, LIMITED, WALLACEBURG, ONT.

64311—Claim No. 12682, sugar used for relief of fire sufferers ..	$101 70	
66831— " 14172, overcharge on sugar	3 03	
		$104 73

DOMINION OF CANADA GUARANTEE & ACCIDENT COMPANY, TORONTO, ONT.

64361—Ticket balance	$1 26	
65278— " "	41	
65981— " "	28	
66430— " "	55	
67483— " "	1 11	
67862— " "	1 24	
68799— " "	69	
69138— " "	70	
69945— " "	1 93	
70506— " "	96	
71067— " "	69	
71590— " "	83	
		$10 65

DELAWARE, LACKAWANNA & WESTERN RAILROAD COMPANY, NEW YORK, N.Y.

64425—Car service balance	$97 65	
65020—Car repairs	3 37	
65158—Car service balance	109 30	
65288—Car destroyed by fire July, 1916	292 00	
65312—Car destroyed by fire, July, 1916	423 08	
66123—Car service balance	156 75	
65758—Car repairs	39 90	
66326—Car service balance	179 80	
66578—Car repairs	35 33	
66673— "	1 08	
67319—Car service balance	117 25	
67702— " "	112 50	
67812—Car repairs	6 35	
68683—Car service balance	255 00	
69192— " "	34 05	
68983—Car repairs	2 54	
69841—Car service balance	51 85	
69678—Car repairs	1 75	
70394—Car service balance	147 25	
70971— " "	82 00	
71343—Car repairs	2 84	
70832— "	66 23	
71502—Car service balance	76 80	
		$2,294 67

DENVER & RIO GRANDE RAILROAD COMPANY, DENVER, COL.

64427—Car service balance	$21 60	
64202—Car repairs	1 95	
65160—Car service balance	13 05	
65954—Car repairs	1 96	
66713— "	3 44	
68401— "	3 38	
69194—Car service balance	16 35	
69445—Car repairs	5 20	
69845—Car service balance	6 90	
71109—Car repairs	1 23	
71506—Car service balance	1 80	
		$76 86

DULUTH, WINNIPEG & PACIFIC RAILWAY, TORONTO, ONT.

64429—Car service balance	$1 80	
65162— " "	11 70	
65897— " "	44 10	
66328— " "	29 25	
67365— " "	12 00	
67704— " "	27 75	
68687— " "	60 00	
69196— " "	42 00	
70332—Car repairs	95	
70396—Car service balance	21 00	
70975— " "	25 80	
71508— " "	25 20	
71656—Car repairs	64	
		$302 19

DETROIT & MACKINAC RAILWAY COMPANY, DETROIT, MICH.

64431—Car service balance	$8 55	
64232—Car repairs	57	
66143—Car service balance	1 50	
69000—Car repairs	32 37	
69198—Car service balance	2 85	
70977— " "	16 80	
		$62 64

DENVER & SALT LAKE RAILROAD COMPANY, DENVER, COL.

64433—Car service balance	$3 60	
67056—Car repairs	90	
		$4 50

L. DEL VILLAN, TIMMINS, ONT.

64549*a*—Claim No. 12889, loss washing machine	$7 50	
		$7 50

THE DOUGALL VARNISH COMPANY, LIMITED, MONTREAL, QUE.

63892—Varnish	$78 40	
64717— "	137 20	
65097— "	137 20	
66892— "	156 80	
68016— "	166 60	
69539— "	44 10	
70279— "	101 92	
70858— "	7 84	
		$830 06

DOMINION PRINTING & LOOSE LEAF COMPANY, LIMITED, OTTAWA, ONT.

64020—Stationery supplies	$16 20	
65337— " "	66 60	
66118— " "	5 00	
67073— " "	59 40	
68902— " "	86 40	
70501— " "	8 60	
70721— " "	39 60	
71346— " "	19 80	
		$301 60

J. J. DOUGLASS, NORTH BAY, ONT.

64298—Travelling expenses	$30 25	
64997— " "	27 75	
65898— " "	29 90	
66343— " "	15 55	

J. J. Douglass, North Bay, Ont.—*Continued.*

67889—Travelling expenses	$46 35	
68176— " "	28 80	
68935— " "	21 20	
69796— " "	22 50	
70335— " "	15 65	
70846— " "	24 00	
		$261 95

Detroit Terminal Railroad Company, Detroit, Mich.

64302—Car repairs	$ 56	
65961— "	4 96	
67951— "	2 70	
69627— "	68	
		$8 90

W. J. Damp, North Bay, Ont.

64350—Travelling expenses	$5 15	
65123— " "	9 25	
		$14 40

Dominion Steel Foundry Company, Limited, Hamilton, Ont.

64492—Bracket	$13 87	
65018—Steel castings	7 06	
66124—Bracket	17 56	
67202—Fulcrums, etc.	110 44	
67558—Castings, etc.	235 71	
68111— "	184 17	
68546— "	166 19	
69305— "	184 38	
69631— "	41 04	
69846— "	43 35	
70731—Wedge block	20 16	
71300—Castings	17 06	
		$1,040 99

Dunlop's, Toronto, Ont.

64782—Funeral design	$15 00	
66917— " "	30 00	
		$45 00

Department of Agriculture, Ottawa, Ont.

65350—Overcharge in freight	$16 00	
		$16 00

Department of Inland Revenue, Ottawa, Ont.

65384—War Tax collections	$2,227 23	
67224— " "	1,882 81	
69332— " "	2,356 12	
71391— " "	2,607 83	
		$9,073 99

Dunlop Tire & Rubber Goods Company, Limited, Toronto, Ontario.

64819—Hose	$163 66	
65093— "	368 77	
65572— "	58 80	
66920— "	97 81	
68372— "	55 52	
70596— "	98 79	
70860— "	45 23	
		$888 58

DOMINION EMBOSSING & PRINTING COMPANY, TORONTO, ONT.

64999—Stationery supplies	$18 00	
66215— " "	38 50	
		$56 50

B. W. DUNNET & COMPANY, OTTAWA, ONT.

65657—Claim No. 13721, overcharge rate car of hay	$14 26	
		$14 26

DANVILLE & WESTERN RAILWAY COMPANY, WASHINGTON, D.C.

65959—Car service balance	$6 00	
		$6 00

M. B. DOUGLAS, NORTH BAY, ONT.

65542—Travelling expenses	$8 95	
		$8 95

DETROIT, BAY CITY & WESTERN RAILROAD COMPANY, BAY CITY, MICH.

65664—Car repairs	$14 46	
		$14 46

H. DAVIS, TIMMINS, ONT.

65688—Claim No. 13497, loss chocolates	$1 15	
		$1 15

E. DAVID, CONNAUGHT STATION, ONT.

66106—Ties	$12 00	
		$12 00

G. H. DELL, KENABEEK, P.O., ONT.

66106—Ties	$106 68	
68597— "	20 00	
		$126 68

DOMINION CHAIN COMPANY, LIMITED, MONTREAL, QUE.

66120—Spring cotters	$6 61	
69239— " "	40 39	
		$47 00

M. R. DOHERTY, UNO PARK, ONT.

66497—Wood	$1 75	
		$1 75

DEPARTMENT OF PUBLIC PRINTING & STATIONERY, OTTAWA, ONT.

66649—Subscriptions, B. R. C. Orders	$3 00	
66817— " " "	6 00	
		$9 00

E. DIESORMEAU, NUSHKA, ONT.

66829—Ties	$101 98	
		$101 98

DODGE MANUFACTURING COMPANY, LIMITED, TORONTO, ONT.

67167—Iron pulleys, etc.	$26 84	
		$26 84

JAMES DOIG & COMPANY, SWASTIKA, ONT.

67599—Supplies furnished engineering party	$2 25	
67945—Claim No. 13905, damage to spring	6 00	
69572— " 15307, damage to screen door	4 93	
71237— " 15178, damage to chairs	3 44	
		$16 62

JOHN DEROSIER, TEMAGAMI, ONT.

66740—Wood	$10 00	
		$10 00

CHAS. DALL, MATHESON, ONT.

66792—Claim No. 14407, damage to cabbage	$3 35	
		$3 35

DUNER COMPANY, CHICAGO, ILL.

67160—Iron	$29 25	
		$29 25

DR. C. F. DORSEY, IROQUOIS FALLS, ONT.

67270—Professional services rendered	$25 00	
		$25 00

THE DAYTON MANUFACTURING COMPANY, DAYTON, OHIO.

67522—Trap door bumpers	$13 86	
68117— " " "	8 46	
71080—Racks	56 10	
		$78 42

THE DOMINION ATLANTIC RAILWAY CO., KENTVILLE, N.S.

67906—Car repairs	$ 13	
71588—Ticket balance	3 60	
		$3 73

MISS A. DOWNING, TORONTO, ONT.

67621—Services rendered	$37 50	
		$37 50

DAY & GORDON, HAILEYBURY, ONT.

67657—Professional services rendered	$209 75	
		$209 75

JOHN DALY, FERONIA, ONT.

67661—Hardwood	$4 50	
		$4 50

JAS. DESJARDINE, NORTH BAY, ONT.

67757—Travelling expenses	$4 90	
70813— " "	12 40	
		$17 30

SAM. DAVIS, NORTH BAY, ONT.

67759—Travelling expenses	$5 30	
68178— " "	1 75	
		$7 05

MRS. JOHN DUCK, MOUNT DENNIS, ONT.

67789—Claim No. 12589, loss household goods	$26 00	
		$26 00

R. DEADMAN, NORTH BAY, ONT.

68007—Travelling expenses	$11 20	
70882— " "	6 15	
		$17 35

DEFIANCE CHECK WRITER CORPORATION, ROCHESTER, N.Y.

68027—Ink, etc.	$2 91	
		$2 91

DODGE SALES & ENGINEERING COMPANY, MISHAWAKA, IND.

68119—Pulleys and bushings	$92 70	
		$92 70

DONALD DUFF, THORNLOE, ONT.

68597—Ties	$144 72	
70224— "	45 00	
		$189 72

MRS. A. DAVIDSON, LATCHFORD, ONT.

68318—Claim No. 14190, damage to chairs and stove	$5 00	
		$5 00

A. DESCHENE, HAILEYBURY, ONT.

68394—Claim No. 13722, loss oats	$1 80	
		$1 80

R. D. DEVLIN, COBALT, ONT.

68084—Claim No. 14476, loss chocolates	$1 33	
71212— " 16027, loss olive oil	1 84	
		$3 17

V. A. DESJARDINS, RAMORE, ONT.

68730—Ties	$79 55	
		$79 55

DEPARTMENT OF LANDS & FORESTS, QUEBEC, QUE.

68900—Trees	$61 00	
		$61 00

DEPARTMENT OF LANDS & MINES, TORONTO, ONT.

69306—Claim No. 15263, overcharge car lumber	$33 00	
70180—Fire protection on Tie Timber Reservations	1,036 80	
		$1,069 80

H. C. DUNBAR, HAILEYBURY, ONT.

69143—Claim No. 15070, overcharge lumber	$10 04	
69965—Rebate *re* private siding	18 00	
		$28 04

DOMINION PAPER BOX COMPANY, LTD., TORONTO, ONT.

69309—Boxes	$18 00	
		$18 00

MRS. T. DARRAH, COBALT, ONT.

69441—Claim No. 14969, loss glassware ..... $7 19 — $7 19

DEPARTMENT OF NAVAL SERVICE, OTTAWA, ONT.

69629—Refund *re* transportation ..... $23 94 — $23 94

THE DELRAY CONNECTING RAILROAD CO., DETROIT, MICH.

69673—Car repairs ..... $5 49 — $5 49

N. DESORMEAU, NORTH BAY, ONT.

70041—Meals furnished telephone inspector ..... $21 35 — $21 35

W. DAVIS, NORTH BAY, ONT.

69412—Travelling expenses ..... $8 25 — $8 25

DOMINION PAINT WORKS, LIMITED, WALKERVILLE, ONT.

69570—Claim No. 14266, overcharge on paint ..... $6 63 — $6 63

FRANK D. DUFF, NORTH BAY, ONT.

69612—Award W. C. B. *re* alleged injuries ..... $34 30 — $34 30

DICKSON CREEK MINES, LIMITED, HAILEYBURY, ONT.

70260—Claim No. 13322, loss steel ..... $21 25 — $21 25

NAP. DUBOIS, SESEKINIKA, ONT.

70291—Award W. C. B. *re* alleged injury ..... $22 07 — $22 07

DEPARTMENT INTERNMENT OPERATION, OTTAWA, ONT.

70417—Claim No. 16087, overcharge on hay ..... $12 30 — $12 30

J. W. DICKSON, NORTH BAY, ONT.

70661—Travelling expenses ..... $10 75 — $10 75

DULUTH, MISSABE & NORTHERN RAILWAY CO., DULUTH, MINN.

70979—Car service balance ..... $4 80 — $4 80

DOMINION PRESS CLIPPING AGENCY, TORONTO, ONT.

71219—Clippings ..... $ 25
71194— " ..... 40 — $ 65

DOMINION CANNERS, LIMITED, HAMILTON, ONT.

71239—Claim No. 15299, loss beans	$14 76	
		$14 76

W. DANAHER, NORTH BAY, ONT.

70586—Travelling expenses	$10 40	
70772— " "	1 90	
		$12 30

C. A. DUNHAM COMPANY, LTD., TORONTO, ONT.

70616—Pump	$296 45	
		$296 45

JOSEPH DASTON, POTTER, ONT.

70738—Fencing	$41 80	
		$41 80

WILLIAM DAVIES COMPANY, LIMITED, TORONTO, ONT.

71216—Claim No. 13851, damage to shortening	$6 80	
		$6 80

J. L. ENGLEHART, TORONTO, ONT.

Honorarium	$2,500 00	
Remuneration less deduction war saving certificates	4,911 99	
Expenses	762 00	
		$8,173 99

ELKINS & SINCLAIR, HAILEYBURY, ONT.

63329—Meat	$6 40	
63877— "	122 74	
64005— "	363 27	
64026— "	56 10	
64496— "	218 56	
65385— "	206 57	
66128— "	65 55	
67161— "	28 45	
67247—Claim No. 13433, loss apples	5 75	
67166—Meat	10 10	
67526— "	2 50	
68183— "	42 70	
68523— "	86 92	
68550— "	173 60	
68904— "	48 60	
69004— "	57 67	
69317— "	59 08	
69571— "	100 60	
69852— "	56 94	
70264—Claim No. 15181, loss extracts	5 00	
70751—Meat	181 36	
71086— "	46 80	
		$1,945 26

ERIE RAILROAD COMPANY, NEW YORK, N.Y.

63475—Car repairs	$31 87
63701—Claim	16 68
64435—Car service balance	108 50
64208—Car repairs	22 60
64906— "	18 02
65022— "	17 49
65164—Car service balance	98 55

ERIE RAILROAD COMPANY, NEW YORK.—*Continued.*

65314—Cars destroyed by fires, July, 1916	$2,708 07	
66001—Car service balance	206 63	
65624—Car repairs	24 80	
65960— "	47 79	
66332—Car service balance	158 21	
66923—Car repairs	15 11	
67367—Car service balance	34 50	
67706— " "	209 75	
68143—Car repairs	30 19	
68689—Car service balance	379 95	
68708—Car repairs	13 41	
69200—Car service balance	46 20	
69637—Car repairs	19 52	
69847—Car service balance	141 00	
70480— " "	157 50	
70645—Car repairs	14 23	
70981—Car service balance	237 55	
70790—Car repairs	38 63	
71510—Car service balance	289 20	
71592—Ticket balance	8 75	
		$5,094 70

GEO. EARL, NORTH BAY, ONT.

63603—Travelling expenses	$2 85	
65001— " "	12 35	
65608— " "	3 50	
66751— " "	3 60	
66894— " "	5 40	
68180— " "	8 20	
70337— " "	24 75	
		$60 65

WM. ENGLISH, NORTH BAY, ONT.

63687—Travelling expenses	$20 30	
64494— " "	26 60	
65169— " "	18 20	
65588— " "	30 30	
66345— " "	27 75	
66872— " "	22 30	
68184— " "	29 10	
68080— " "	27 25	
69189— " "	37 45	
69494— " "	32 50	
70365— " "	32 96	
71322— " "	37 15	
		$341 86

E. B. EDDY COMPANY, LTD., HULL, QUE.

63879—Fibre	$34 00	
64089—Matches, etc.	61 65	
64024—Blotting paper and fibre	50 56	
65341—Matches	6 60	
65433—Nile toilet Fixtures	72 48	
67237— " " "	111 90	
67180—Blotting paper	14 00	
68548—Nile toilet	71 58	
69709— "	22 80	
69854—Fibre	35 60	
70503—Paper	32 49	
70739—Fibre	35 60	
		$549 26

ELECTRIC SUPPLY COMPANY, NORTH BAY, ONT.

64091—Electrical supplies	$5 20	
64498— " "	7 98	
66361— " "	2 90	
		$16 08

H. P. ECKHARDT & COMPANY, TORONTO, ONT.

64291—Claim No. 13008, loss sugar	$122 92	
66050— " 13723, loss sugar	43 15	
		$166 07

J. EDE, IROQUOIS FALLS, ONT.

64313—Claim No. 12005, loss account shortage potatoes	$2 00	
66784— " 12005, overcharge hardware	3 05	
		$5 05

EL PASO & SOUTHWESTERN SYSTEM, EL PASO, TEXAS.

64437—Car service balance	$2 25	
64597—Car repairs	7 35	
65166—Car service balance	1 35	
66003— " "	4 80	
66330— " "	9 00	
67373— " "	1 50	
68800—Car repairs	5 11	
		$31 36

SAM. ERRETT, DIVISION COURT CLERK, ENGLEHART, ONT.

63950—Judgment John Clark vs. E. Emmons, unclaimed wages..	$8 22	
		$8 22

EDWARDS, MORGAN & COMPANY, TORONTO, ONT.

64156—Services rendered, audit	$396 15	
		$396 15

A. EDWARDS, COCHRANE, ONT.

64204—Travelling expenses	$5 80	
65167— " "	18 85	
65924— " "	12 25	
66409— " "	19 80	
66896— " "	19 70	
67767— " "	26 25	
68188— " "	19 45	
68939— " "	21 70	
69540— " "	16 10	
70321— " "	19 95	
70888— " "	25 10	
		$204 95

GEORGE EHELER, RAMORE P.O., ONT.

64286—Ties	$29 66	
		$29 66

C. ELIZUCK, TIMMINS, ONT.

64816—Claim No. 11857, alleged loss sausage machine	$67 00	
		$67 00

THE EVENING TELEGRAM, TORONTO, ONT.

65068—Advertising	$3 24	
67601— "	4 50	
68327— "	3 60	
68682— "	3 42	
69533— "	3 24	
70807— "	3 24	
		$21 24

THE T. EATON COMPANY, LIMITED, TORONTO, ONT.

63273—Office furnishings	$969 13	
63743—Claim No. 13006, loss bed and springs	10 35	
64245— " 13004, loss groceries	25 86	
63984—Office furniture	10 40	
64734—Claims Nos. 13259-62-60-63, loss furniture	25 05	
64814— " 12771-12852-13200, loss groceries	57 04	
64691—Office furniture	55 00	
65061—Claims Nos. 13257-13291-13290, loss dry goods	42 16	
65451—Tapestry and aprons	19 50	
65621—Claims Nos. 13375-13397, loss dry goods	41 42	
66044—Claim No. 13691, loss bed and springs	10 80	
66160—Claims Nos. 13842-13827, loss wire and dresser	11 20	
67021— " 13376-13003-13933-13627-13934, loss furniture and dry goods	85 23	
67169—Blankets and towels	27 30	
66988—Office furniture	7 00	
67310—Claims Nos. 13261-14194-14376, loss miscellaneous supplies	46 73	
68191—Blankets, etc.	219 50	
68345—Soap	3 00	
68838—Claim No. 14349, damage to bed and mattress	2 50	
69308— " 13937, loss dry goods	30 60	
69047—Office furniture	11 40	
69311—Groceries	81 05	
69313—Dry goods	12 84	
69711—Groceries	20 56	
69492— "	36 80	
69624—Dry goods, etc.	86 30	
69912—Groceries	16 88	
70134— "	55 87	
70737—Dry goods	182 28	
70694— "	32 11	
70862—Groceries	69 55	
70864—Dry goods, etc.	110 58	
70954—Claim No. 12768, loss roofing paper	54 35	
		$2,470 34

EXTENSION PRINT, TORONTO, ONT.

64689—Advertising	$15 00	
		$15 00

EASTERN CANADIAN PASSENGER ASSOCIATION, MONTREAL, QUE.

64771—General assessment	$6 00	
65426—Rules for excursions	1 80	
65644—General assessment	10 00	
66363— " "	10 00	
66756— " "	18 75	
67934— " "	10 00	
68556—Publications	4 47	
69800—General assessment	16 00	
70823— " "	10 00	
71365—Publications	13 20	
71392—General assessment	10 00	
		$110 22

A. Eheler, Tomstown P.O., Ont.

65159—Ties	$119 88	
66876— "	26 28	
68065— "	39 53	
70224— "	10 80	
		$196 49

J. Eydt, Cobalt, Ont.

65225—Claim No. 12929, damage to radiator sections	$1 08	
		$1 08

G. Elias & Bro., Buffalo, N.Y.

65339—Lumber	$606 64	
67440— "	672 83	
68662— "	47 24	
69856— "	207 68	
		$1.534 39

Elgin, Joliet & Eastern Railway Co., Chicago, Ill.

65801—Car repairs	$5 83	
65760— "	2 75	
65958— "	1 64	
66612— "	12 78	
66715— "	75	
67060— "	73	
68987— "	53	
69670— "	3 23	
70983— "	75 80	
71111— "	2 84	
70788— "	34 40	
		$141 28

Edmonton, Dunvegan & British Columbia Railway, Edmonton, Alta.

66005—Car service balance	$1 80	
66334— " "	3 75	
67375— " "	75	
67708— " "	2 25	
68691— " "	18 75	
		$27 30

Elk Lake Power Company, Elk Lake, Ont.

66490—Current supplied	$12 85	
		$12 85

Essex Free Press, Essex, Ont.

66467—Advertising	$3 00	
		$3 00

Employers' Liability Assurance Corporation, Ltd., Toronto, Ont.

66469—Renewal premium on Bond No. 29328	$132 01	
68121— " " " 29126	146 04	
69420— " " " 29328	119 84	
		$397 89

Empire Coal Company, Limited, Montreal, Que.

66869—Claim No. 14217, overcharge demurrage	$14 00	
		$14 00

East St. Louis, Columbia & Waterloo Railway Company, St. Louis, M.O.

66901—Interurban cars, N. C. R.	$21,000 00	
		$21,000 00

Eureka Refrigerator Company, Limited, Toronto, Ont.

66878—Refrigerator	$198 00	
		$198 00

Englehart Drug Store, Englehart, Ont.

66986—Castor oil	$1 20	
		$1 20

C. H. Ellis, Toronto, Ont.

68123—Expenses, a/c delayed train	$9 15	
		$9 15

J. J. Elliott, Heaslip, Ont.

68597—Ties	$46 86	
68946— "	19 60	
		$66 46

R. E. Edwards, Englehart, Ont.

68328—Claim No. 14588, loss disinfectant	$ 52	
		$ 52

"Echoes," Toronto, Ont.

68867—Advertising	$30 00	
		$30 00

Erie Tool Works, Incorporated, Erie, Pa.

69315—Vise	$30 00	
		$30 00

The H. M. Edwards Agency, New Liskeard, Ont.

69447—Claim No. 15182, loss balance wheel	$1 00	
69989—Claims Nos. 15535 and 15537, damage to machinery	75	
70662— " 15553 and 15657, " "	3 31	
		$5 06

W. J. Evans, New Liskeard, Ont.

69574—Claim No. 14970, damage to buggies	$12 00	
		$12 00

Evansville & Indianapolis Railroad, Terre Haute, Ind.

69668—Car repairs	$2 11	
70106— "	90	
70336— "	5 39	
		$8 40

Englehart & District Agricultural Society, Englehart, Ont.

69758—Donation *re* Englehart Fair	$25 00	
		$25 00

C. H. Empie, North Bay, Ont.

70254—Award W. C. B. *re* alleged injuries	$51 24	
		$51 24

ERIE & MICHIGAN RAILWAY & NAVIGATION COMPANY, CHICAGO, ILL.

70338—Car repairs	$1 71	
		$1 71

ENGLAND BROTHERS, NEW LISKEARD, ONT.

70825—Provisions	$2 07	
71088— "	2 40	
		$4 47

S. D. EPLETT, NEW LISKEARD, ONT.

70827—Provisions	$1 50	
		$1 50

REV. J. W. EDWARDS, COCHRANE, ONT.

70664—Claim No. 15237, refund on clothing re fire sufferers	$15 36	
		$15 36

CORPORATION OF THE TOWN OF ENGLEHART, ENGLEHART, ONT.

66574—Water supplied	$396 81	
67550— " "	142 62	
68696— " "	127 63	
69060— " "	78 30	
		$745 36

C. L. FERGUSON, NORTH BAY, ONT.

63279—Disbursements, Customs charges, etc.	$550 22	
63643—Payrolls	5,000 00	
63645— "	96,481 50	
63995—Disbursements, Customs charges, etc.	1,286 01	
64297— " postage, etc.	88 49	
64028— " Customs charges, etc.	1,534 49	
64104— " " "	183 98	
64366—Payrolls	40,000 00	
64368— "	58,807 35	
64304—Disbursements, passenger refunds	425 00	
64372— " postage, etc.	120 62	
64530— " passenger refunds	217 20	
64693— " Customs charges, etc.	2,044 07	
64751— " " "	401 94	
65003— " " "	977 59	
65155—Payrolls	58,713 27	
65157— "	40,000 00	
65171—Disbursements, postage, etc.	119 06	
65687— " passenger refunds	655 89	
65484— " Customs charges, etc.	921 49	
65492— " " "	2,261 84	
65728— " passenger refunds	2,962 62	
65796—Payrolls	40,000 00	
65798— "	54,849 56	
66164—Disbursements, postage, etc.	105 08	
66209— " Customs charges, etc.	3,126 82	
66317— " " "	3,002 92	
66661— " " "	2,764 07	
66757—Payrolls	40,000 00	
66759— "	62,257 03	
66891—Disbursements, postage, etc.	117 86	
67039— " passenger refunds	373 33	
66672— " Customs charges, etc.	4,293 10	
66682— " " "	2,230 99	
66730— " " "	3,116 28	
66764— " " "	4,303 04	

C. L. Ferguson, North Bay, Ont.—*Continued.*

66854—Disbursements, Customs charges, etc.	$3,498 69	
66964— " postage, etc.	109 37	
66966—Payrolls	40,000 00	
66968— "	56,613 89	
67112—Disbursements, passenger refunds	173 44	
67484— " Customs charges, etc.	619 32	
67659— " " "	1,737 87	
67721— " " "	10,784 92	
67883— " " "	37 22	
67967—Payrolls	40,000 00	
67969— "	60,387 57	
68029—Disbursements, postage, etc.	127 30	
68403— " passenger refunds	224 79	
67978— " Customs charges, etc.	1,018 08	
68008— " " "	1,337 24	
68572— " passenger refunds	268 05	
68304—Payrolls	46,563 86	
68360— "	55,024 36	
68364—Disbursements, Customs charges, etc.	498 81	
68272— " " "	3,091 97	
68464— " postage, etc.	99 94	
68875— " Customs charges, etc.	4,363 53	
68955— " " "	3,531 56	
69039—Payrolls	40,000 00	
69041— "	66,466 08	
69051—Disbursements, postage, etc.	130 94	
69573— " passenger refunds	239 65	
69370— " Customs charges, etc.	6,044 90	
69408— " " "	5,314 87	
69542— " " "	3,564 10	
69746—Payrolls	40,000 00	
69748— "	70,440 10	
69810—Disbursements, postage, etc.	140 23	
70206— " passenger refunds	215 20	
70213— " Customs charges, etc.	2,159 24	
70249— " " "	2,312 41	
70331— " " "	1,774 63	
70351—Payrolls	50 00	
70475— "	45,000 00	
70477— "	62,771 84	
70557—Disbursements, postage, etc.	111 34	
70601— " passenger refunds	194 84	
71173—Collection on payroll account	5 81	
70584—Disbursements, Customs charges, etc.	2,033 28	
70628— " " "	2,966 89	
70720— " " "	2,964 52	
70922— " postage, etc.	104 00	
70984—Payrolls	45,000 00	
70986— "	72,248 61	
71260—Disbursements, passenger refunds	165 97	
		$1,336,823 94

Wm. A. Force & Company, New York City, N.Y.

63391—Numbering machine	$28 50	
		$28 50

Fort Smith & Western Railroad, Fort Smith, Ark.

63477—Car repairs	$ 67	
66113—Car service balance	6 60	
		$7 27

A. A. Fraser, North Bay, Ont.

63561—Travelling expenses		$7 75	
64354— " "		14 55	
64891— " "		8 30	
65560— " "		5 55	
66852— " "		19 00	
67891— " "		18 40	
68116— " "		58 60	
69049— " "		66 80	
69802— " "		67 45	
70453— " "		60 60	
71012— " "		37 95	
			$364 95

S. J. Faught, North Bay, Ont.

63617—Travelling expenses		$18 00	
64110— " "		18 00	
65127— " "		16 95	
65554— " "		3 85	
66898— " "		4 95	
68182— " "		8 50	
68941— " "		8 80	
70936— " "		24 10	
			$103 15

Frost Steel & Wire Company, Limited, Hamilton, Ont.

63637—Wire		$566 13	
			$566 13

A. & F. Fisher, Toronto, Ont.

63973—Cabinets		$140 00	
			$140 00

S. Ferro, North Bay, Ont.

63997—Travelling expenses		$4 55	
			$4 55

J. Fennell, Englehart, Ont.

64249—Claim No. 11433, loss maple syrup		$2 56	
			$2 56

Fesserton Timber Company, Limited, Toronto, Ont.

64315—Claim No. 12687, overcharge rate lumber		$58 67	
66885— " 12687, " " "		37 25	
70425— " 12687, " " "		56 45	
71218— " 12901, " " "		19 21	
			$171 58

Fruit Growers' Express, Chicago, Ill.

64439—Car service balance		$3 43	
65168— " "		7 66	
66007— " "		7 74	
69202— " "		1 90	
69849— " "		2 16	
70408— " "		2 16	
			$25 05

FORT WORTH & DENVER CITY RAILWAY COMPANY, FORT WORTH, TEX.

64441—Car service balance	$9 00	
64236—Car repairs	2 16	
65170—Car service balance	4 05	
66009— " "	24 75	
67377— " "	9 75	
67710— " "	11 75	
69851— " "	1 20	
70398— " "	3 60	
70965— " "	60	
		$66 86

FORT DODGE, DES MOINES & SOUTHERN RAILROAD COMPANY, BOONE, IA.

64443—Car service balance	$8 55	
65024—Car repairs	8 37	
65172—Car service balance	20 70	
66011— " "	30 00	
66336— " "	6 75	
67381— " "	9 75	
67714— " "	5 25	
68693— " "	8 25	
69204— " "	8 55	
69853— " "	4 80	
70400— " "	1 20	
70985— " "	8 40	
71512— " "	6 60	
		$127 17

L. M. FERGUSON, NORTH BAY, ONT.

64646—Travelling expenses	$14 50	
65129— " "	11 90	
65726— " "	17 80	
66675— " "	22 70	
67294— " "	15 80	
70043— " "	35	
		$83 05

T. FORZCZEUK, NORTH BAY, ONT.

64730—Award W. C. B. *re* alleged injuries	$12 38	
		$12 38

NICOLA FASANO, COCHRANE, ONT.

64872—Claim No. 12983, loss wine	$13 50	
68258— " 14847, loss macaroni	1 80	
		$15 30

FROTHINGHAM & WORKMAN, LTD., MONTREAL, QUE.

65187—Iron	$37 32	
66708— "	593 18	
67909— "	12 33	
68456— "	149 55	
		$792 38

W. J. FIELDING, PORQUIS JUNCTION, ONT.

65623—Claim No. 13362, loss bag of flour	$4 77	
66829—Ties	74 00	
66876— "	15 16	
68730— "	154 60	
69642— "	6 40	
69642— "	66 60	
		$321 53

GEORGE FERGUSON, UNO PARK, ONT.

65733—Claim No. 13173, loss mattress	$8 00	
		$8 00

THE FIFTY THOUSAND CLUB, TORONTO, ONT.

65398—Deductions from payrolls	$9 00	
65416— " " "	14 80	
66167— " " "	8 00	
66199— " " "	9 00	
66646— " " "	8 00	
66668— " " "	8 00	
67625— " " "	7 00	
67635— " " "	11 00	
67962— " " "	10 00	
67968— " " "	7 00	
68825— " " "	7 00	
68835— " " "	10 00	
69336— " " "	7 00	
69354— " " "	10 00	
70087— " " "	12 00	
70205— " " "	7 00	
70544— " " "	7 00	
70560— " " "	13 00	
		$164 80

FRASER & CHALMERS OF CANADA, LTD., MONTREAL, QUE.

66415—Claim No. 13150, loss machinery	$21 11	
		$21 11

FORT WORTH & RIO GRANDE RAILWAY, FORT WORTH, TEXAS.

67379—Car service balance	$8 25	
67712— " "	14 25	
		$22 50

FLORIDA EAST COAST RAILWAY, ST. AUGUSTINE, FLA.

67383—Car service balance	$4 50	
67497—Ticket balance	22 10	
67840—Car service balance	1 50	
70987— " "	5 40	
		$33 50

FREIGHT CLAIM ASSOCIATION, RICHMOND, VA.

66686—Rules	$1 23	
68538—Assessments	12 00	
		$13 23

GEO. FLEURY, NORTH BAY, ONT.

66690—Award W. C. B. *re* alleged injuries	$17 44	
		$17 44

J. FRAZO, COCHRANE, ONT.

66772—Award W. C. B. *re* alleged injuries	$44 97	
		$44 97

FERGUSON & MCFADDEN, TOMIKO, ONT.

66790—Claim No. 13247, overcharge on lumber	$31 95	
		$31 95

FOWKE & GERRARD, CHARLTON, ONT.

67328—Claim No. 13687, loss chocolates	$1 12	
70609— " 15792, damage to fruit jars	79	
		$1 91

FLETCHER MANUFACTURING COMPANY, LIMITED, TORONTO, ONT.

67442—Galvanized pipe, etc.	$52 00	
		$52 00

FRANK TOURIST COMPANY, NEW YORK, N.Y.

67999—Commission on ticket sales	$ 50	
69765— " "	3 08	
		$3 58

FRANKLIN RAILWAY SUPPLY COMPANY, NEW YORK, N.Y.

68125—Fire doors	$400 00	
		$400 00

W. M. FEE, NEW LISKEARD, ONT.

68351—Claim No. 14453, alleged damage to music cabinet	$4 00	
		$4 00

EMIL FRANK, PORQUIS P.O., ONT.

68597—Ties	$51 14	
69642— "	21 80	
		$72 94

W. FOWKE, CHARLTON, ONT.

68552—Meals and lodging *re* snow blockade	$9 35	
		$9 35

W. J. FLEMING, COBALT, ONT.

69449—Claim No. 14867, loss syrup	$4 85	
		$4 85

A. FERRIS, TIMMINS, ONT.

69991—Claim No. 15134, damage to fruit	$1 42	
		$1 42

FEDERAL REFRIGERATOR DESPATCH, CHICAGO, ILL.

70989—Car service balance	$7 59	
		$7 59

F. FELDMAN, TIMMINS, ONT.

71241—Claim No. 15637, damage to fruit jars	$ 67	
		$ 67

FAIRMONT GAS ENGINE & RAILWAY MOTOR CAR CO., FAIRMONT, MINNESOTA.

71090—Engine	$72 50	
		$72 50

GRAND TRUNK RAILWAY SYSTEM, MONTREAL, QUE.

63253—Freight settlement	$270 22
63289— " "	936 11
63319— " "	205 48
63377— " "	895 45

GRAND TRUNK RAILWAY SYSTEM, MONTREAL, QUE.—*Continued.*

63481—Car repairs	$21 14
63939—Claims	76
64097—Proportion joint switching revenue, etc.	138 96
64299—Commission	1 23
64445—Car service balance	1,732 90
64539a—Interline freight balance	33,867 22
64565—Line service expenses, joint trains	1,892 06
64567—Commission	53 47
63876—Freight settlement	302 27
63882— " "	913 27
64064— " "	866 78
64096—Line service expenses, joint trains	238 83
64212—Car repairs, etc.	705 57
64306—Proportion cost of advertising, etc.	208 74
64404—Claims	15 33
64462— "	133 87
64648—Loss operation dining car service, joint trains	367 06
64840—Claims	62 63
64846— "	3 77
64862— "	118 05
64930— "	235 37
64932—Proportion joint switching revenue, rental of cinder cars and car repairs	177 21
64936—Proportion joint switching revenue	56 75
64968—Proportion of cost tariffs, transcontinental folders, etc.	159 89
64970—Proportion of cost advertising	85 80
65026—Line services expenses, joint trains	778 10
65030—Car repairs	60 55
65070—Proportion of cost advertising	13 85
65174—Car service balance	3,083 10
65290—Cost of inspecting and testing scales	62 36
65316—Interline freight balance	14,106 03
65332—Claims	31 62
65354—Supplies to car "Temagami"	11 45
65386—Ticket balance	748 75
65320—Line service expenses, joint trains	255 67
64705—Freight settlement	247 53
64753— " "	694 50
64755— " "	719 30
64765— " "	854 13
64883— " "	261 98
65149—Claims	71 46
65179—Proportion of cost advertising	157 09
65217—Claims	31 90
65625— "	85 92
65641—Freight settlement	1,000 15
65721—Proportion loss operation dining car service, joint trains	328 45
65743—Interline freight balance	13,072 86
65773—Claims	187 07
65791—Commission	84
65817—Cleaning and supplies for private car	26 36
65929—Car repairs	65 22
65983—Interline ticket balance	3,667 45
66147—Car service balance	3,659 07
66159—Freight settlement	934 68
65428— " "	936 51
65434— " "	394 19
65458— " "	580 84
65616—Commission	28 14
65690—Claims	64 96
65962—Car repairs, proportion joint switching revenue, etc.	142 33
66344—Car service balance	1,992 60
66432—Interline ticket balance	418 05
66538—Claims	5 71
66628—Car repairs	152 90
66634—Freight settlement	401 06

GRAND TRUNK RAILWAY SYSTEM, MONTREAL, QUE.—*Continued.*

66636—Interline freight balance	$17,043 75
66203—Freight settlement	1,276 98
66561— " "	920 99
66635—Proportion expense *re* lecture work	6 84
66741—Claims	67 45
66943—Proportion cost *re* advertising, etc.	415 95
66949—Claims	37 35
67051—Proportion profit operation joint ice house, North Bay, car repairs	1,348 00
67331—Proportion joint switching revenue, etc.	471 65
67485—Interline ticket balance	1,554 88
67503—Car service balance	1,723 89
67525—Interline freight balance	12,833 59
66676—Freight settlement	863 49
66750— " "	2,067 94
67086— " "	650 72
67832—Claims	65 27
67634—Interline freight balance	25,353 76
67646—Proportion profit operation joint stock yards, etc.	353 98
67794—Car service balance	2,782 42
67864—Interline ticket balance	306 09
67665—Freight balance	117 54
67787— " "	1,768 93
68033—Car repairs, etc.	737 76
68071—Claims	191 50
68239—Proportion revenue for weighing cars	24 97
68493—Refund overpayment B/C 16061	33 75
68575—Freight settlement	617 99
68617—Cars destroyed by fire of July, 1916	12,604 05
68801—Interline ticket balance	1,237 90
67964—Freight settlement	802 33
67982— " "	28 47
67998— " "	66 43
68270— " "	4,405 54
68820—Line service expenses, joint trains	185 81
68742—Car repairs	1,048 68
68700—Proportion joint switching revenue	7 71
68504—Claims	167 07
68562—Commission	27 85
68852—Supplies to car "Temagami"	12 54
69010—Proportion rental cinder cars, line service expenses	27 94
69068—Supplies to car "Temagami"	19 40
69070—Proportion loss operation dining car service, joint trains	427 69
69072—Line service expenses, joint trains	169 21
69074—Interline freight balance	3,376 00
69094—Claims	174 04
69206—Car service balance	440 15
68853—Freight settlement	1,576 05
68863— " "	880 37
68881— " "	1,158 36
68917— " "	1,132 85
68989— " "	60 40
69145— " "	68 07
69199—Proportion cost *re* advertising	405 49
69577—Line service expenses, joint trains	515 27
69767—Proportion joint switching revenue	204 85
69771—Claims	2 83
70033—Proportion cost *re* advertising	37 09
69368—Freight settlement	818 78
69376— " "	1,764 00
69512— " "	512 53
69556—Claims	245 87
70024— "	23 30
70110—Car repairs	504 83
70266—Claims	104 60
70348—Claims	411 56

GRAND TRUNK RAILWAY SYSTEM, MONTREAL, QUE.—*Continued.*

70536—Interline freight balance	$42,226 25	
71207—Line service, joint trains, etc.	1,133 78	
71311—Claims	152 12	
71321—Interline freight balance	31,671 57	
71381—Proportion joint switching	8 67	
71735—Line service, joint trains, etc.	807 92	
70656—Claims	112 40	
71004—Line service, joint trains	845 83	
70561—Proportion joint switching revenue	316 53	
71434—Claims	28 98	
71694—Proportion joint switching revenue	958 59	
71702—Interline freight balance	38,713 55	
		$321,270 45

THE GRAHAM NAIL WORKS, TORONTO, ONT.

63301—Nails	$204 33	
63621— "	340 40	
63918—Tacks	20 67	
64308—Nails	2 06	
64719— "	42 99	
65183— "	306 45	
65498— "	73 11	
66239— "	333 64	
66799— "	20 74	
68020— "	513 13	
68872— "	12 20	
68961— "	4 18	
70389— "	283 22	
		$2,157 12

GARLOCK PACKING COMPANY, HAMILTON, ONT.

63303—Packing	$13 13	
63881— "	104 88	
64781— "	39 96	
64837— "	24 50	
66347— "	74 54	
67769— "	151 50	
68885— "	22 17	
		$430 68

THE GURNEY FOUNDRY COMPANY, LIMITED, TORONTO, ONT.

63331—Stoves	$75 56	
63887—Stove parts	12 05	
65027—Claim No. 13195, loss stove and parts	44 00	
65189—Stove fittings	102 46	
65435—Stove	3 00	
65496— "	20 14	
66132—Stove parts	4 75	
66219—Stoves	45 28	
66795—Range and fittings	302 14	
67176—Oven door frame	1 08	
68520—Stove	50 04	
69715—Boiler	30 60	
69858—Stove tops, etc.	17 48	
70745—Stove	18 55	
		$727 13

GRIP LIMITED, TORONTO, ONT.

63333—Zinc of signature	$1 00	
67835—Half tone	13 00	
		$14 00

GOODYEAR TIRE & RUBBER COMPANY OF CANADA, LIMITED, TORONTO, ONT.

63393—Sheet rubber	$39 31	
63663—Rubber goods	3 82	
64074—Valves and hose	376 18	
64853—Hose	482 65	
65494—Air hose bags	291 55	
		$1,193 51

THE B. GREENING WIRE COMPANY, LIMITED, HAMILTON, ONT.

63395—Wire cloth	$1 76	
64851—Wire	19 19	
65500—Smoke box netting	285 55	
65800—Wire, etc.	162 83	
66900— "	70 41	
67486—Wire	2 28	
67703— "	40 92	
67913—Steel rope	123 11	
69398—Wire	45 47	
69496— "	211 60	
70251— "	52 62	
70866—Rope	3 68	
70598—Cleaners	11 76	
		$1,031 18

F. R. GIBSON, HAILEYBURY, ONT.

63459—Contract plumbing and heating tenement houses, Iroquois Falls	$918 00	
64134—Contract plumbing and heating tenement houses, Iroquois Falls	24 90	
64773—Repairing pipes	1 35	
65627—Claim No. 12976, alleged damage to closet tank	8 04	
65689—Installation heating system, Matheson	961 31	
65715—Plumbing and heating tenement houses, Iroquois Falls	672 99	
67529—Repairs to heating system, Haileybury station	9 83	
68189—Installation heating system, Matheson	357 04	
70212—Plumbing, Iroquois Falls	183 40	
71616—Plumbing, Haileybury	53 55	
		$3,190 41

GREAT NORTHERN RAILWAY COMPANY, ST. PAUL, MINN.

63479—Car repairs	$7 90	
64214— "	12 54	
65963— "	2 61	
66145—Car service balance	40 44	
65762—Car repairs	1 90	
66338—Car service balance	5 00	
66560—Car destroyed in fire of July, 1916	744 79	
66973—Car repairs	16 01	
67385—Car service balance	11 75	
67908—Car repairs	2 23	
68478— "	1 23	
69212—Car service balance	41 49	
68991—Car repairs	1 72	
69855—Car service balance	46 32	
70108—Car repairs	13 42	
70340— "	25 00	
71069—Ticket balance	29 38	
71345—Car repairs	9 78	
		$1,013 51

W. A. Griffin, S. of T., North Bay, Ont.

63587—Salary, Nov,, 1916	$283 33	
64356— " Dec., 1916	283 33	
65071— " Jan., 1917	283 33	
65173—Expenses	46 64	
65614—Salary, Feb., 1917	283 33	
66551— " Mar., 1917	283 33	
66881—Expenses	40 24	
66930—Salary, April, 1917	283 33	
67899— " May, 1917	283 33	
68355—Expenses	15 65	
68298—Salary, June, 1917 —	283 33	
69035— " July, 1917	293 00	
69053—Expenses	33 10	
69618—Salary, Aug., 1917	293 00	
69804—Expenses	21 25	
70355—Salary, Sept., 1917	293 00	
71223—Expenses	12 55	
70914—Salary, Oct., 1917	293 00	
71324—Expenses	22 00	
		$3,630 07

W. A. Graham, P. A. & S. K., North Bay, Ont.

63589—Salary, Nov., 1916 less deductions for Patriotic Fund	$200 00	
64358— " Dec., 1916, " " " "	200 00	
64500—Travelling expenses	5 05	
65073—Salary, Jan., 1917, less deductions for Patriotic Fund	198 00	
65610— " Feb., 1917, " " " "	198 00	
66553— " Mar., 1917, " " " "	198 00	
66932— " April, 1917, " " " "	198 00	
67182—Travelling expenses	3 00	
67901—Salary, May, 1917, less deductions for Patriotic Fund	198 00	
68300— " June, 1917, " " " "	198 00	
69031— " July, 1917, " " " "	198 00	
70037—Travelling expenses	5 00	
69616—Salary, Aug., 1917, less deductions for Patriotic Fund	198 00	
70357— " Sept., 1917, " " " "	198 00	
70918— " Oct., 1917, " " " "	198 00	
		$2,393 05

Miss T. Gregory, North Bay, Ont.

63591—Salary, Nov., 1916, less deductions for Patriotic Fund	$69 00	
64360— " Dec., 1916, " " " "	69 00	
65069— " Jan., 1917, " " " "	69 00	
65612— " Feb., 1917 " " " "	69 00	
66555— " March, 1917, " " " "	69 00	
66928— " April, 1917 " " " "	69 00	
67897— " May, 1917 " " " "	69 00	
68294— " June, 1917, " " " "	69 00	
69033— " July, 1917, " " " "	69 00	
69430— " Aug., 1917, " " " "	69 00	
70375— " Sept., 1917, " " " "	69 00	
70916— " Oct., 1917 " " " "	69 00	
		$828 00

Great Northwestern Telegraph Company of Canada.

63619—Telegraph service	$ 96
63885— " "	5 98
64541— " "	5 52
64132— " "	26
64650— " "	7 88
65072— " "	2 27
65177— " "	4 72
65303— " "	3 88

GREAT NORTHWESTERN TELEGRAPH COMPANY OF CANADA.—*Continued.*

65605—Telegraph service	$7 68	
65643— " "	11 47	
65820— " "	6 61	
66582— " "	4 60	
66584— " "	21 93	
66819— " "	7 24	
66927— " "	4 50	
67603— " "	6 32	
66990— " "	26	
67528— " "	5 77	
68031— " "	5 19	
68207— " "	44 50	
68311— " "	3 98	
68569— " "	30	
68094— " "	66	
68724— " "	9 13	
68720—Tariff books	14 00	
68722—Telegraph service	1 75	
68698— " "	1 61	
68524— " "	6 44	
68856— " "	89	
68964— " "	78	
69064— " "	26	
69081— " "	6 48	
69491— " "	5 19	
69493— " "	7 98	
69575— " "	1 20	
69536— " "	33	
69724— " "	14 74	
70066— " "	43	
70208— " "	5 33	
70391— " "	26	
70559— " "	7 01	
70563— " "	5 42	
71175— " "	4 02	
71325— " "	8 07	
71336— " "	11 19	
71618— " "	1 78	
		$276 77

J. GRIEVE, TIMMINS, ONT.

63857—Travelling expenses	$5 20	
64934— " "	4 80	
65845— " "	1 60	
66248— " "	4 80	
66959— " "	4 80	
67438— " "	3 60	
68357— " "	2 40	
68907— " "	4 80	
69191— " "	3 20	
70214— " "	4 80	
70797— " "	6 00	
71696— " "	2 40	
		$48 40

GRAND TRUNK PACIFIC RAILWAY, MONTREAL, QUE.

63883—Proportion expenses Trans-Continental Freight Bureau..	$12 23
63941—Claims	18 37
64210—Tariffs	40 00
64460—Claims	15 15
65330—Claim	2 25
65352—Proportion expense Trans-Continental Freight Bureau....	14 78
65147—Claims	16 09

GRAND TRUNK PACIFIC RAILWAY, MONTREAL, QUE.—*Continued.*

65659—Claims	$2 38	
65697— "	34 03	
65751—Proportion expense Trans-Continental Freight Bureau	14 39	
65716—Claim	1 37	
66290— "	7 83	
66530— "	3 92	
66753— "	11 80	
66897— "	1 32	
66899— "	6 86	
66925—Car repairs	32 08	
67329—Claims	7 10	
67384— "	8 96	
67386— "	9 62	
67638—Proportion expense Trans-Continental Freight Bureau	12 95	
68145—Claims	10 19	
68568—Proportion expense Trans-Continental Freight Bureau	18 09	
68312—Cars destroyed by fires of July, 1916	4,201 64	
68412—Claims	6 71	
68678—Car service balance	2,332 67	
69214— " "	1,400 32	
69312—Claims	15 82	
63914—Claim	3 07	
69497— "	6 42	
68614— "	20 02	
68806—Car repairs	6 50	
69769— "	23 68	
69859—Car service balance	1,252 42	
70073—Claims	8 02	
69710— "	7 01	
69732—Car repairs	13 51	
70034—Claims	14 27	
70300—Proportion expense Trans-Continental Freight Bureau	11 65	
70404—Car service balance	995 14	
70455—Proportion expense Trans-Continental Freight Bureau	24 75	
70995—Car service balance	982 03	
71113—Car repairs	12 04	
71303—Claims	7 50	
71309— "	6 38	
70742—Car repairs	1 98	
71430—Claims	10 93	
71432— "	8 26	
71520—Car service balance	1,309 57	
71660—Car repairs	26 89	
		$13,010 96

GUTTA PERCHA & RUBBER, LIMITED, TORONTO, ONT.

63965—Claim No. 12954, alleged loss rubber goods	$242 63	
64893—Hose	181 79	
65099— "	117 83	
67911— "	296 68	
68018— "	73 74	
68120— "	111 75	
69396— "	3 20	
		$1,027 62

GENERAL SUPPLY COMPANY OF CANADA, LIMITED, TORONTO, ONT.

64003—Pipe fittings	$31 85
64506—Gate valves	15 22
65439—Gate valves, nipples, couplings, etc.	143 70
66138—Nipples, etc.	48 44
67257—Pipe fittings, etc.	130 61
67190—Rivets, etc.	8 80
67600—Drills, etc.	62 06

GENERAL SUPPLY COMPANY OF CANADA, LIMITED, TORONTO, ONT.—*Continued.*

68147—Pipe fittings	355 23	
68070— "	12 26	
68560—Couplings, etc.	51 39	
69363—Unions, etc.	34 96	
69717—Couplings	4 63	
69862— " etc.	82 24	
70509—Nipples, etc.	25 84	
70741—Valves, etc.	47 52	
71094—Bushings, etc.	14 64	
		$1,069 39

GEO. GORDON & COMPANY, LIMITED, CACHE BAY, ONT.

64093—Roofing, etc.	$1,417 44	
64512—Lumber	990 68	
65437— "	289 03	
68129—Laths	150 00	
69323—Lumber	760 41	
69713— "	724 17	
69874— "	526 47	
70505— "	1,903 40	
70743— "	530 32	
71302— "	709 26	
		$8,001 18

GRAND TRUNK PACIFIC COAST STEAMSHIP COMPANY, LIMITED, VANCOUVER, B.C.

64235—Commission	$ 44	
64569— "	65	
64908— "	86	
65346— "	43	
67139— "	1 27	
67226— "	37	
70298— "	1 10	
71594—Ticket balance	186 34	
		$191 46

GREEN BAY & WESTERN RAILROAD COMPANY, GREEN BAY, WIS.

64447—Car service balance	$8 10	
65176— " "	18 00	
66013— " "	11 40	
67387— " "	1 50	
		$39 00

GALVESTON, HARRISBURG & SAN ANTONIO RAILWAY COMPANY, HOUSTON, TEXAS.

64449—Car service balance	$13 05	
65028—Car repairs	1 93	
65178—Car service balance	14 40	
65280—Ticket balance	15 64	
66017—Car service balance	53 85	
66340— " "	54 00	
66434—Ticket balance	21 73	
69639—Car repairs	9 03	
70834— "	16	
		$183 79

GEORGIA SOUTHERN & FLORIDA RAILWAY COMPANY, MACON, GA.

64451—Car service balance	$2 70	
65180— " "	8 10	
66019— " "	22 95	
66342— " "	9 00	
70482— " "	5 70	
70647—Car repairs	1 73	
71516—Car service balance	4 20	
		$54 38

GRASSELLI CHEMICAL COMPANY, LIMITED, CLEVELAND, OHIO.

64453—Car service balance	$3 80	
66346— " "	1 90	
67389— " "	3 79	
67842— " "	3 79	
68697— " "	1 90	
		$15 18

GENERAL AMERICAN TANK CAR CORPORATION, CHICAGO, ILL.

64455—Car service balance	$3 48	
69857— " "	1 54	
70993— " "	77	
71518— " "	4 25	
		$10 04

GULF, COLORADO & SANTA FE RAILWAY COMPANY, GALVESTON, TEXAS.

64607—Car repairs	$12 16	
		$12 16

F. GERBASE, NORTH BAY, ONT.

63952—Travelling expenses	$6 65	
		$6 65

THE HOTEL GOLDFIELDS, TIMMINS, ONT.

64136—Board and lodging engineering party	$53 50	
65468— " " " "	8 00	
67679— " " " "	49 25	
68966— " " " "	38 50	
69432— " " " "	29 50	
69458— " " " "	26 00	
70210— " " " "	18 00	
		$222 75

BENJAMIN GARDNER, THORNLOE P.O., ONT.

64286—Ties	$30 54	
70224— "	51 30	
		$81 84

GOODYEAR LUMBER COMPANY, BUFFALO, N.Y.

64502—Lumber	$359 57	
69876— "	625 46	
		$985 03

GALENA SIGNAL OIL COMPANY, TORONTO, ONT.

64504—Oil and grease	$861 77	
65387— " "	1,213 05	
66130— " "	973 95	
67181—Oil	1,028 78	
68127— "	874 10	
69321— "	972 14	
70507— "	933 72	
71096— "	1,017 73	
		$7,875 24

GOLDEN-ANDERSON VALVE SPECIALTY COMPANY, PITTSBURG, PA.

64508—Valve	$51 00	
66134— "	19 00	
		$70 00

GRAND & TOY, LIMITED, TORONTO, ONT.

64510—Stationery supplies	$18 00	
65345— " "	50 00	
66136— " "	159 90	
66365— " "	66 70	
66765— " "	117 65	
66941— " "	23 80	
67168— " "	69 50	
67474— " "	18 75	
68809— " "	63 20	
68062— " "	96 88	
68222— " "	150 76	
68906— " "	17 25	
69008— " "	61 85	
69860— " "	75	
70517— " "	37 50	
70744— " "	158 33	
71394— " "	30 15	
		$1,140 97

MRS. J. B. GIBBONS, OTTAWA, ONT.

64818—Claim No. 12854, alleged loss sewing machine	$32 50	
		$32 50

ALFRED GEHRIG, CHARLTON, ONT.

64820—Claim No. 11283, loss finnan haddie	$7 20	
		$7 20

THE GRODWARDS COMPANY, COBALT, ONT.

64822—Claim No. 12238, loss box of bolts, etc.	$43 00	
65043—Claims Nos. 12644 and 13279, loss oil and damage to drill	42 37	
69708—Claim No. 13310, overcharge on coal, etc.	47 35	
70028— " 14126, overcharge ore crusher parts	3 06	
71220— " 14661, loss rosin oil	34 74	
		$170 52

W. H. GILLARD & COMPANY, HAMILTON, ONT.

64824—Claim No. 13196, loss groceries	$26 10	
64884— " 13374, loss matches	19 80	
		$45 90

THE GLOBE PRINTING COMPANY, TORONTO, ONT.

65074—Advertising	$2 80	
65450—Subscription	3 00	
66367—Advertising	3 92	
66677— "	36 00	
66818— "	3 20	
65175— "	50 00	
69149— "	2 88	
70253— "	2 80	
		$104 60

GEORGE GALI, ENGLEHART, ONT.

65318—Award W. C. B. *re* alleged injuries	$36 92	
		$36 92

A. W. GOLDING, CLUTE P.O., ONT.

64965—Claim No. 13450, loss confectionery	$1 00	
65699— " 13454, loss sugar	1 69	
68326— " 14201, loss raisins	5 10	
69197— " 14272, loss raisins	2 47	
69993— " 14355, damage to sugar	5 00	
		$15 26

CHAS. S. GILES, COCHRANE, ONT.

65031—Claim No. 12571, loss lavatory basin, etc.	$9 77	
65561—Plumbing, Cochrane station	9 40	
64492— " "	17 62	
68942—Claim No. 13944, damage to closet bowl	7 50	
69006—Repairs to roof, Cochrane station	3 40	
69967—Plumbing, Cochrane station	60 65	
70035— " " "	3 75	
		$112 09

GANONG BROTHERS, LIMITED, ST. STEPHEN'S, N.B.

65051—Claim No. 12892, loss confectionery	$226 08	
		$226 08

M. GAVAND, PORQUIS P.O., ONT.

65159—Ties	$10 20	
		$10 20

GURNEY SCALE COMPANY, HAMILTON, ONT.

65185—Cash drawers	$10 29	
		$10 29

THE GOUROCK ROPEWORK EXPORT CO., LTD., MONTREAL, QUE.

65343—Rope	$74 27	
67174— "	42 96	
64095— "	7 88	
70511— "	76 68	
		$201 79

GUSTAV WIEDEKE COMPANY, DAYTON, OHIO.

65581—Tube expander	$41 20	
		$41 20

J. GUILFOYLE, TIMMINS, ONT.

65629—Claim No. 12908, damage to chair	$1 50	
		$1 50

GILLIES BROS., LIMITED, GILLIES DEPOT, ONT.

65683—Material for repairing culvert	$29 20	
66829—Poles	3 75	
		$32 95

S. GRAHAM, HAILEYBURY, ONT.

65735—Claim No. 13479, loss confectionery	$1 63	
		$1 63

THE GRILLS COMPANY, NEW LISKEARD, ONT.

65765—Claim No. 13232, loss potatoes	$1 58	
66833— " 13833, loss tobacco	8 00	
68240— " 14422, damage to rug	8 00	
70611— " 14662, loss oats	5 48	
		$23 06

GRAND RAPIDS & INDIANA RAILWAY CO., PHILADELPHIA, PA.

65803—Car repairs	$8 47	
		$8 47

GEORGIA RAILROAD, AUGUSTA, GA.

65965—Car repairs	$ 92	
65964— "	10 29	
70991—Car service balance	7 50	
		$18 71

GULF & SHIP ISLAND RAILROAD COMPANY, GULFPORT, MASS.

65967—Car repairs	$3 12	
68706— "	3 38	
69210—Car service balance	6 00	
70402— " "	60	
		$13 10

GILMORE & PITTSBURG RAILROAD, ARMSTEAD, MONT.

66015—Car service balance	$ 90	
		$ 90

GULF, TEXAS & WESTERN RAILWAY CO., DALLAS, TEXAS.

66021—Car service balance	$ 90	
		$ 90

GALT, PRESTON & HESPELER RAILWAY, GALT, ONT.

66163—Interline freight balance	$7 12	
68695—Car service balance	2 25	
68817—Interline Freight balance	21 47	
69066— " " "	39 05	
69208—Car service balance	3 60	
69193—Claims	22 93	
69495— "	23 43	
70071— "	15 01	
70146— "	7 29	
71305— "	22 47	
71436— "	20 14	
		$184 76

E. M. GOODMAN, NEW LISKEARD, ONT.

65846—Additional remuneration	$30 00	
66559— " "	10 00	
66956— " "	10 00	
67895— " "	10 00	
68292— " "	10 00	
69029— " "	10 00	
69614— " "	10 00	
70353— " "	10 00	
70912— " "	10 00	
		$110 00

T. J. GRACEY, A. OF D. & A., TORONTO, ONT.

66319—Travelling expenses	$3 00	
65078— " "	2 50	
		$5 50

W. F. GOOD, PARHAM, ONT.

66445—Claim No. 13116, overcharge car of machinery	$5 00	
68388—Ties	935 22	
69642— "	126 00	
		$1,066 22

GILL & LONG, TORONTO, ONT.

66481—Livery service	$1 50	
69062— " "	2 25	
		$3 75

WM. GIDNEY, EARLTON, ONT.

66523—Meals, laborers	$4 20	
		$4 20

W. J. GAGE & COMPANY, LTD., TORONTO, ONT.

66603—Stationery supplies	$6 20	
66688— " "	148 80	
70541— " "	73 25	
71262— " "	67 62	
		$295 87

GENERAL MANIFOLD & PRINTING COMPANY, FRANKLIN, PA.

67203—Stationery supplies	$6 10	
67771— " "	46 35	
70515— " "	4 95	
71092— " "	45 90	
		$103 30

E. GRAFTON, ENGLEHART, ONT.

67551—Travelling expenses	$11 40	
		$11 40

S. GOOCH, PORQUIS P.O., ONT.

66876—Ties	$304 63	
66876— "	376 07	
68597— "	129 25	
68730— "	340 10	
		$1,150 05

GORMAN, ECKERT & COMPANY, LIMITED, LONDON, ONT.

67813—Claim No. 14335, loss coffee	$30 00	
		$30 00

GALVESTON, HOUSTON & HENDERSON RAILROAD CO., GALVESTON, TEXAS.

67977—Car repairs	$3 95	
		$3 95

THE GLOBE FURNITURE COMPANY, LIMITED, WATERLOO, ONT.

68149—Settees	$431 00	
		$431 00

GRAVES, BIGWOOD & COMPANY, TORONTO, ONT.

68353—Claim No. 13739, overcharge car of lumber	$7 78	
69195— " 13739, overcharge freight	1 14	
		$8 92

GULF, MOBILE & NORTHERN RAILROAD CO., MOBILE, ALA.

68405—Car repairs	$4 56	
		$4 56

J. R. Gordon, Timmins, Ont.

68595—Provisions	$225 00	
70956—Claim No. 14593, damage to vegetables and fruit	200 00	
		$425 00

E. C. Gardiner, Thornloe, Ont.

68610—Slabs	$42 00	
69319— "	15 00	
		$57 00

Georgia & Florida Railway, Augusta, Ga.

68592—Car service balance	$17 55	
		$17 55

Gifford-Wood Company, Hudson, N.Y.

68666—Hardware supplies	$17 45	
69325— " "	27 12	
70513— " "	14 99	
		$59 56

E. Goulet, Haileybury, Ont.

69310—Claim No. 14869, damage to cheese vat	$7 25	
		$7 25

David Gourd, Amos Sur, Harricana, Que.

69147—Claim No. 13622, overcharge on hay	$3 26	
		$3 26

S. Greenwood & Sons, New Liskeard, Ont.

69576—Claim No. 14423, damage to beans	$8 71	
70022— " 14660, shortage tea	11 47	
70613— " 15793, damage to syrup	1 55	
		$21 73

D. B. Giles, Elk Lake, Ont.

69878—Sawing wood	$6 00	
		$6 00

J. J. Gartshore, Toronto, Ont.

69914—Refund deposit on track material	$49 33	
71408—Claim No. 14627, overcharge on rails	27 46	
		$76 79

W. Graham, Tomstown, Ont.

70020—Claim No. 15823, overcharge settlers' effects	$4 80	
		$4 80

A. Gilchrist, Heaslip, Ont.

70224—Ties	$27 40	
		$27 40

A. L. Herbert, Cobalt, Ont.

63369—Coal	$246 08	
67941—Claim No. 13685, loss fish	3 61	
		$249 69

ROMEYN B. HOUGH, LOWVILLE, N.Y.

63397—Handbook on trees	$6 00	
		$6 00

HAMILTON STAMP & STENCIL WORKS, LIMITED, HAMILTON, ONT.

63399—Stamps	$3 44	
64030—Stamps, etc.	3 63	
65389—Stamps and dater	12 82	
66148— " "	20 57	
67209—Stamps	3 32	
67178—Stamps, etc.	14 76	
67488—Dater and ribbons	4 90	
68163—Stamp and dater	7 73	
68529—Dater ribbons	6 18	
68908—Stamps and dater	8 77	
69327—Dater, etc.	6 24	
69641— "	3 08	
69884—Stamps	2 59	
70519— "	20 15	
70747— "	1 95	
71100— "	81	
71304— "	15 58	
		$136 52

W. J. HARPER, A. OF R. & C. A., NORTH BAY, ONT.

63457—Travelling expenses	$2 00	
64206— " "	7 10	
67761— " "	5 75	
		$14 85

HOCKING VALLEY RAILROAD COMPANY, COLUMBUS, O.

63483—Car repairs	$1 31	
64457—Car service balance	14 40	
66107— " "	24 75	
65764—Car repairs	84	
66348—Car service balance	19 50	
67716— " "	11 25	
68701— " "	4 50	
68156—Car repairs	1 38	
68993— "	2 95	
69672— "	2 88	
70518—Car service balance	11 40	
71662—Car repairs	1 96	
		$97 12

HENDERSON & ANGUS, NORTH BAY, ONT.

63493—Contract, Timmins station	$850 00	
64938— " " "	1,190 00	
65961— " " "	6,754 64	
66437— " " "	250 00	
		$9,044 64

HAMILTON & CO., HAILEYBURY, ONT.

63703—Claim No. 11955, loss liquors	$13 91	
64317— " 11994, loss liquors	21 89	
64832— " 11273, loss liquors	4 51	
67939— " 12370, loss liquors	10 18	
		$50 49

E. M. Hobson, Cochrane, Ont.

63705—Claim No. 12147, loss one dressed hog	$14 03	
70516— " 13360, damage to potatoes	62 50	
71177—Supplies car "Abitibi"	10 65	
71243—Claim No. 15991, shortage chocolate	1 22	
71222— " 15990, loss cigarettes	96	
		$89 36

Haileybury Supply Store, Haileybury, Ont.

63771—Claim No. 12972, damage to soda biscuits	$1 61	
69203— " 15315, loss milk	50	
		$2 11

Ham & Grant, Englehart, Ont.

63773—Claim No. 12833, loss peas	$1 42	
68154—Groceries furnished *re* delayed train	23 35	
		$24 77

John Harrison & Sons, Co., Ltd., Owen Sound, Ont.

64099—Tie plugs	$70 00	
66142— "	70 00	
70565— "	70 00	
		$210 00

The Holden Co., Limited, Montreal, Que.

64201—Iron, headlight parts, etc.	$183 44	
64514—Headlight carbons, etc.	150 53	
65453—Headlight parts	157 33	
66140—Carbons, etc.	108 76	
66605—Headlight material	371 41	
67223—Electric lamps, etc.	147 21	
67444—Headlight material	125 72	
68159— " "	75 86	
68642—Reflectors, iron	94 84	
69014—Headlight parts	85 40	
69721—Iron	106 68	
69888—Headlight parts	36 42	
		$1,643 60

Hydro-Electric Power Commission of Ontario.

64203—Lamps	$35 04	
64534— "	308 05	
64910—Current supplied	211 81	
65441—Lamps	57 00	
66499— "	633 45	
67185— "	249 26	
67602— "	76 40	
68161— "	106 46	
68253—Current supplied	107 67	
64659— " "	197 04	
65563— " "	187 29	
66452— " "	171 20	
67605— " "	157 16	
67564— " "	112 58	
68522—Lamps	248 80	
68772—Current supplied	102 50	
69016—Lamps	15 60	
69503—Current supplied	99 29	
69719—Lamps	221 22	
69886— "	61 60	
70302—Current supplied	121 34	
70803— " "	123 36	
71098—Lamps	90 44	
71348—Current supplied	152 41	
		$3,846 97

HOUSTON EAST & WEST TEXAS RAILWAY COMPANY, HOUSTON, TEXAS.

64609—Car repairs	$ 32	
66614— "	1 58	
67957— "	86	
70838— "	8 52	
		$11 28

HOUSTON & TEXAS CENTRAL RAILROAD CO., HOUSTON, TEXAS.

64611—Car repairs	$2 44	
68490— "	7 03	
71115— "	2 35	
70836— "	3 13	
		$14 95

S. R. HART & COMPANY, TORONTO, ONT.

63986—Stationery supplies	$22 75	
64757— " "	30 00	
65109— " "	16 25	
66945— " "	21 25	
68335— " "	13 00	
68280— " "	3 25	
69096— " "	22 00	
70829— " "	7 50	
71157— " "	9 75	
		$145 75

THE HAMILTON BRIDGE WORKS, LIMITED, HAMILTON, ONT.

64032—Car sills	$630 00	
66144—Steel, etc.	328 60	
68153—Plates	85 50	
68608—Plates, etc.	1,304 25	
		$2,348 35

ROBERT W. HUNT CO., LIMITED, MONTREAL, QUE.

64034—Inspection	$89 86	
64516— "	35 50	
68151— "	7 15	
69018— "	76 43	
69916— "	11 53	
		$220 47

GEO. H. HEES, SON & COMPANY, LIMITED, TORONTO, ONT.

64216—Shades	$2 63	
64895—Tow, moss and hair	119 92	
65734—Carpet binding	2 96	
66311—Linen	16 76	
67207—Carpet binding	2 25	
67366—Shades	7 94	
67669— "	6 57	
68686—Carpet binding	2 96	
68891—Shades	2 65	
68923— "	7 25	
69498— "	24 10	
70600— "	7 39	
		$203 38

E. H. HITCHCOCK, WARUN P.O., ONT.

64286—Ties	$6 00	
69880—Slabs	4 00	
		$10 00

THE HAMILTON HERALD, HAMILTON, ONT.

64532—Advertising	$20 00	
		$20 00

HILL-CLARK-FRANCIS, LIMITED, NEW LISKEARD, ONT.

64828—Claim No. 10352, loss cement	$124 80	
69499— " 15257, damage to sheaves	2 85	
		$127 65

FRANK HEASMAN, NEW LISKEARD, ONT.

64830—Claim No. 13026, loss chestnuts	$1 67	
65035— " 12811, loss apples	3 75	
66869— " 13999, loss cocoa	40	
67023— " 14292, loss cheese	39	
67330— " 14425, loss catsup	43	
67857—Claims Nos. 14695 and 14424, loss olives and peanuts	1 90	
68359—Claim No. 14692, damage to bottle of pickles	15	
68268— " 14957, loss jam	23	
69997— " 15538, shortage sardines	24	
69582—Claims Nos. 15692 and 15370, shortage biscuits and pickles	2 67	
70615—Claim No. 14694, loss sugar	7 95	
		$19 78

MRS. E. HARPELL, WATERFORD, ONT.

64834—Claim No. 11847, overcharge household goods	$2 50	
		$2 50

HOLLINGER GOLD MINES, LIMITED, TIMMINS, ONT.

64856—Claim No. 12890, loss drill hose	$866 04	
64969—Claims Nos. 13478-11924, damage to pumphead and overcharge on gold slag	56 86	
65694—Claim No. 12891, damage to chain blocks by fire	793 56	
66092— " 12961, loss switching material by fire	819 00	
66871— " 13505, loss of pipe	10 65	
69995— " 14595, loss castings	17 40	
		$2,563 51

HOGG & LYTLE, LIMITED, TORONTO, ONT.

65356—Rebate, private siding	$102 00	
67511— " " "	16 00	
68434— " " "	22 00	
70304— " " "	6 00	
		$146 00

HEATON'S AGENCY, TORONTO, ONT.

64695—Heaton's Annual	$1 25	
		$1 25

R. B. HUNTER, FULTON, N.Y.

64967—Claim No. 11963, overcharge weight pulpwood	$30 80	
65661— " 12582, overcharge weight pulpwood	104 10	
		$134 90

H. HARRISON, NORTH BAY, ONT.

65005—Travelling expenses	$1 55	
		$1 55

Wm. Hiltz, Porquis Junction, Ont.

65101—Award W. C. B. *re* alleged injuries	$20 44	
65305— " " " "	14 02	
65607— " " " "	14 02	
66269— " " " "	21 03	
66767— " " " "	11 68	
		$81 19

Geo. Hawkins, North Bay, Ont.

65131—Travelling expenses	$4 90	
66902— " "	2 10	
		$7 00

Harris Abattoir Company, Toronto, Ont.

65219—Claim No. 13103, loss beef	$22 35	
65663— " 13768, loss potatoes	984 18	
67797— " 13111, overcharge car of potatoes	131 68	
		$1,138 21

F. H. Hopkins & Company, Montreal, Que.

65347—Tools	$88 10	
66146—Castings	22 50	
67184—Cables	88 98	
68444—Hoisting friction band	88 30	
		$287 88

Harris Tie & Timber Company, Ottawa, Ont.

65631—Claim No. 13398, overcharge ties	$39 58	
		$39 58

L. H. Herbert & Cie., Limited, Montreal, Que.

65633—Claim No. 12299, damage to lantern globes	$2 29	
		$2 29

Z. Hart, Porcupine, Ont.

65852—Claim No. 13520, loss barrel of apples	$4 95	
		$4 95

O. Hermant & Company, South Porcupine, Ont.

66052—Claim No. 13334, loss bag of beans	$24 23	
66835— " 13686, damage to provisions	13 89	
		$38 12

Holbrook's, Limited, Toronto, Ont.

66068—Claim No. 13692, loss sauces	$15 80	
		$15 80

M. Hartzke, Leeville P.O., Ont.

66106—Ties	$113 69	
66829— "	65 82	
68597— "	27 44	
68388— "	11 40	
		$218 35

E. Halliday, Cane P.O., Ont.

66106—Ties	$45 03	
		$45 03

J. Howe, Cane P.O., Ont.

66106—Ties	$232 63	
68065— "	34 31	
		$266 94

J. Hartney, Cane P.O., Ont.

66106—Ties	$435 04	
		$435 04

Herald Printing Company, New Liskeard, Ont.

66494—Advertising	$1 52	
67410— "	13 65	
		$15 17

The Haileyburian, Haileybury, Ont.

66496—Advertising	$3 00	
67408— "	21 00	
69969— "	4 80	
		$28 80

R. C. Hann, Cochrane, Ont.

66586—Donation typewriter alleged lost in fire, July, 1916	$10 00	
		$10 00

Hoyle Lumber Company, Limited, Morrisburg, Ont.

66588—Rebate on private siding	$118 00	
		$118 00

S. G. V. Holditch, Orillia, Ont.

66417—Claim No. 13510, loss firebrick by fire	$80 00	
		$80 00

F. G. Holt, New Liskeard, Ont.

66447—Claim No. 13339, loss potatoes	$5 00	
		$5 00

Jno. Hutson, Trout Mills, Ont.

66525—Lighting lamp and use of house for waiting-room, Trout Mills	$15 00	
		$15 00

A. Hodgins, Leeville P.O., Ont.

66829—Ties	$96 32	
66829— "	54 04	
66829— "	33 65	
68597— "	14 54	
68388— "	6 00	
		$204 55

Herbert Howe, Toronto, Ont.

66829—Ties	$369 35	
68388— "	40 10	
		$409 45

H. S. Howland, Sons & Co., Limited, Toronto, Ont.

67183—Nails	$3 08	
		$3 08

ALBERT HOPKINS, PORQUIS P.O., ONT.

67255—Ties	$119 99	
		$119 99

HAILEYBURY COAL YARDS, HAILEYBURY, ONT.

66742—Ice	$819 43	
		$819 43

W. HENSON, NEW LISKEARD, ONT.

66782—Claim No. 14336, damage to motor boat	$4 00	
		$4 00

MAX HENRY, COCHRANE, ONT.

67314—Claim No. 12628, freight on shipments burned in forest fire	$4 86	
		$4 86

R. G. HOWIE, MILBERTA P.O., ONT.

67388—Claim No. 14128, overcharge on animal food	$ 35	
70148— " 14057, loss bags	30 00	
		$30 35

HENRY MANUFACTURING & GREASE CUP COMPANY, TERRE HAUTE, IND.

67562—Grease cups	$60 00	
		$60 00

HAYES TRACK APPLIANCE COMPANY, RICHMOND, IND.

68167—Derails	$176 10	
		$176 10

HAGGARD & MARCUSSON COMPANY, CHICAGO, ILL.

68612—Bunks	$160 17	
69012— "	38 47	
		$198 64

J. HUNGERFORD, SMITH COMPANY, LIMITED, TORONTO, ONT.

68316—Claim No. 14788, loss syrup and fruit a/c fire, Cochrane..	$25 48	
		$25 48

J. HOWARD, HEASLIP, ONT.

68730—Ties	$27 03	
69642— "	11 30	
		$38 33

W. H. HARMER & COMPANY, COCHRANE, ONT.

69073—Funeral expenses of M. Dotopki, sectionman	$80 00	
71225— " " T. Maxinchuk, sectionman	65 00	
		$145 00

C. H. HAM, ENGLEHART, ONT.

69201—Claim No. 15336, jars broken	$ 75	
69501— " 15340, damage pickles	1 05	
69580— " 15339, shortage shrimps	1 02	
71245— " 15338, loss syrup	3 27	
		$6 09

ADAM HALL, LIMITED, PETERBOROUGH, ONT.

69451—Stove parts	$5 84	
70657—Range	35 10	
		$40 94

S. HENEROFSKY, ENGLEHART P.O., ONT.

69642—Ties	$69 84	
69642— "	35 90	
70684— "	44 40	
		$150 14

HAMILTON FACING MILL COMPANY, LTD., HAMILTON, ONT.

69882—Crucibles	$6 00	
		$6 00

W. J. HONEYFORD, MATHESON, ONT.

70617—Claim No. 15708, damage to sewing machine, etc.	$10 00	
		$10 00

HARRISON & COMPANY, NEW YORK, N.Y.

70749—Cutting machine	$17 50	
		$17 50

H. HORWITZ, TIMMINS, ONT.

71224—Claim No. 12878, damage to glass dials	$22 50	
		$22 50

B. HENNESSY, HAILEYBURY, ONT.

71306—Poles	$261 50	
		$261 50

THE MILTON HERSEY CO., LTD., MONTREAL, QUE.

63903—Paint analysis	$15 00	
68165—Electrolyte	5 73	
71350— "	11 00	
		$31 73

THE CORPORATION OF THE TOWN OF HAILEYBURY, HAILEYBURY, ONT.

64769—Water rates	$20 40	
67282— " "	20 40	
68822— " "	20 40	
71169— " "	20 40	
		$81 60

IMPERIAL OIL COMPANY, LIMITED, TORONTO, ONT.

63235—Rental offices, November, 1916	$122 92
63889—Fuel oil	25 23
64009—Oil and gasoline	607 03
64461—Car service balance	24 02
63862—Rental offices, December, 1916	122 92
64076—Oils	95 73
64518— "	515 64
65184—Car service balance	22 61
64673—Rental of offices, January, 1917	122 92
65351—Oil and gasoline	171 16
65455— " "	331 25
66025—Car service balance	14 21
65400—Rental offices, February, 1917	122 92
66150—Oil and gasoline	624 63
66350—Car service balance	38 20

IMPERIAL OIL COMPANY, LIMITED. TORONTO, ONT.—*Continued.*

66185—Rental of offices, March, 1917	$152 92	
66419—Claim No. 13593, loss gasoline	3 26	
67333—Oil and gasoline	699 17	
67393—Car service balance	24 37	
66654—Rental offices, April, 1917	152 92	
67192—Oil and gasoline	81 28	
67334—Claim No. 13427, loss steel barrel	10 40	
67606—Oil and gasoline	349 76	
67718—Car service balance	11 33	
67637—Rental of offices, May, 1917	152 92	
68131—Oil and gasoline	490 72	
68705—Car service balance	33 40	
67938—Rental of offices, June, 1917	289 80	
68366—Oil, gasoline, etc.	256 47	
68172—Rebate on private siding	46 00	
68944—Gasoline and oil	138 94	
69216—Car service balance	22 42	
68849—Rental offices, July, 1917	416 67	
69205—Rebate on private siding	6 00	
69207—Oil	85 66	
69677—Gasoline	61 20	
69861—Car service balance	52 75	
69999—Gasoline	34 00	
69356—Rental offices, August, 1917	416 67	
69704—Oil	125 85	
70414—Car service balance	6 46	
70089—Rental offices, September, 1917	416 67	
70255—Oil	169 74	
70659— "	173 50	
70997—Car service balance	10 57	
71247—Claim No. 15839, loss turpentine	4 55	
70564—Rental offices, October, 1917	416 67	
70606—Oil	92 69	
70722—Car repairs	5 38	
70868—Oil, etc.	312 17	
70990—Rebate on private siding	4 00	
71264—Gasoline	86 18	
71522—Car service balance	15 10	
		$8,789 95

THE ILLINOIS CENTRAL RAILROAD COMPANY, CHICAGO, ILL.

63485—Car repairs	$2 42	
64459—Car service balance	49 59	
65182— " "	17 50	
65322—Car destroyed by fires, July, 1916	645 89	
65985—Ticket balance	28	
66023—Car service balance	34 80	
65908—Car repairs	44 94	
67041— "	74 26	
67391—Car service balance	3 45	
67882—Car repairs	80	
68703—Car service balance	5 05	
68480—Car repairs	35 16	
69643— "	43	
69674— "	32 73	
70792— "	1 51	
		$948 81

INTERNATIONAL & GREAT NORTHERN RAILWAY, HOUSTON, TEXAS.

63499—Car repairs	$1 66	
64310— "	6 19	
65819— "	5 53	
65933— "	3 65	
66027—Car service balance	27 15	
66679—Car repairs	5 00	

INTERNATIONAL & GREAT NORTHERN RAILWAY, HOUSTON, TEXAS.—*Continued.*

68707—Car service balance	$51 75	
70112—Car repairs	3 99	
70416—Car service balance	6 00	
70999— " "	4 20	
		$115 12

IRISH & MAULSON, LIMITED, TORONTO, ONT.

63891—Insurance premiums	$11 23	
63900— " "	10,101 20	
64775— " "	72	
65007— " "	25 75	
65636— " "	22 28	
66699— " "	212 62	
66978— " "	1 25	
68035— " "	5 84	
68362— " "	69 89	
69083— " "	19 70	
70567— " "	17 16	
70928— " "	2,205 75	
		$12,693 39

INTERNATIONAL MALLEABLE IRON CO., LTD., GUELPH, ONT.

64205—Castings	$13 80	
65349—Express charges	35	
67187—Iron	75 55	
67194—Castings and iron	70 38	
67530—Castings	22 80	
68179—Castings and iron	35 22	
68336—Castings	7 38	
69020— "	20 97	
70753—Iron	100 70	
71102—Castings	51 30	
		$398 45

IMPERIAL TOBACCO CO. OF CANADA, MONTREAL, QUE.

64251—Claim No. 12855, loss tobacco	$235 13	
64738— " 12768, loss tobacco	565 93	
		$801 06

INTERNATIONAL RAILWAY PUBLISHING CO., LIMITED, MONTREAL, QUE.

64450—Advertising	$27 00	
66929— "	25 25	
68756— "	25 25	
70521— "	25 25	
		$102 75

INTERNATIONAL SEAL & LOCK COMPANY, HASTINGS, MICH.

64536—Tyden seals	$70 50	
66458— "	85 50	
67604— "	142 50	
69890— "	167 50	
		$466 00

INDUSTRIAL WORKS, BAY CITY, MICH.

64538—Journal boxes	$39 00	
67189—Friction clutch	60 60	
66700—Wire rope	81 25	
69918—Wire rope, etc.	119 63	
70755—Wire rope, etc.	90 25	
		$390 73

THE IRWIN AUGER BIT COMPANY, WILMINGTON, OHIO.

64540—Machine bits	$10 61	
		$10 61

IROQUOIS FALLS MERCHANDISING CO., LIMITED, IROQUOIS FALLS, ONT.

64690—Claim No. 13220, loss peroxide	$2 66	
67815—Value of potatoes confiscated	177 50	
68567—Claim No. 13779, loss elbows	2 00	
		$182 16

INDIANA HARBOUR BELT RAILROAD COMPANY, CLEVELAND, OHIO.

65032—Car repairs	$ 90	
65931— "	2 19	
67884— "	1 92	
69579— "	8 24	
		$13 25

ILLINOIS SOUTHERN RAILWAY CO., ST. LOUIS, MO.

65186—Car service balance	$4 95	
		$4 95

INTERNATIONAL TIME RECORDING CO. OF CANADA, LTD., TORONTO, ONT.

66166—Repairing time clock	$29 90	
67430—Daily slips	12 00	
		$41 90

ILLINOIS NORTHERN RAILWAY, CHICAGO, ILL.

66717—Car repairs	$ 58	
		$ 58

THE INDUSTRIAL BANNER, TORONTO, ONT.

67490—Advertising	$25 00	
		$25 00

R. IMRIE, TORONTO, ONT.

67653—Compensation *re* delay (passenger service)	$5 00	
		$5 00

ILLINOIS TRACTION SYSTEM, CHAMPAIGN, ILL.

69218—Car service	$1 20	
		$1 20

INTERNATIONAL HARVESTER CO. OF CANADA, LTD., CHICAGO, ILL.

69151—Claim No. 15222, overcharge rate cream separators	$1 15	
		$1 15

IRON TRADE REVIEW, CLEVELAND, OHIO.

69329—Subscription	$6 00	
		$6 00

THE INDUSTRIAL & TECHNICAL PRESS, LTD., TORONTO, ONT.

70283—Printing	$190 00	
		$190 00

INTERNATIONAL EQUIPMENT CO., LIMITED, MONTREAL, QUE.

71308—Bearings	$17 75	
		$17 75

THE INDIANAPOLIS UNION RAILWAY CO., INDIANAPOLIS, IND.

71664—Car repairs	$5 90	
		$5 90

THE JACKSON PRESS, KINGSTON, ONT.

63401—Stationery supplies	$405 17	
63893— " "	59 75	
64036— " "	143 62	
65391— " "	682 40	
66460— " "	400 55	
67225— " "	250 13	
67232— " "	498 25	
68313— " "	354 90	
68531— " "	292 54	
68605— " "	9 00	
68056— " "	146 25	
68930— " "	37 50	
69365— " "	146 15	
69645— " "	485 28	
69892— " "	481 40	
70757— " "	299 72	
71106— " "	59 50	
		$4,752 11

D. F. JONES MANUFACTURING COMPANY, LIMITED, GANANOQUE, ONT.

63563—Shovels	$77 82	
63890— "	52 63	
65470—Scoops	92 66	
66775—Jones socket	48 75	
68177—Tools	192 35	
69022—Socket	3 83	
		$468 04

JENCKES MACHINE COMPANY, LIMITED, COBALT, ONT.

63707—Claim No. 12277, damage to pump	$6 00	
65635— " 13522, damage to pump connections	6 00	
71226— " 13551, loss steel plates	36 30	
		$48 30

O. F. JORDAN COMPANY, CHICAGO, ILL.

63895—Castings	$20 44	
		$20 44

HUGH JACK, HEASLIP P.O., ONT.

64286—Ties	$29 30	
		$29 30

WILLIAM JUNOR, TORONTO, ONT.

64542—Tumblers	$3 00	
71104—Plates, etc.	14 90	
		$17 90

H. N. JOY, SOUTH PORCUPINE, ONT.

64836—Claims Nos. 13269 and 13268, loss harness oil, etc.	$4 10	
64971—Claim No. 12583, damage to wash-boards	1 09	
65854— " 13346, damage to window glass	4 62	
68974— " 15074, loss paint	71	
69209— " 14724, loss engine oil	4 00	
69584— " 15320, loss turpentine	85	
		$15 37

JONES & MOORE ELECTRICAL COMPANY, LTD., TORONTO, ONT.

66154—Claim No. 12953, loss electric dynamo	$300 00	
		$300 00

T. JOHNSTON, LEE HILL, ONT.

66829—Ties	$59 58	
68065— "	70 93	
68597— "	16 20	
68946— "	6 80	
		$153 51

C. H. JORDON, KENABEEK, ONT.

67255—Ties	$168 13	
68946— "	33 79	
		$201 92

WM. JOHNS, LEEVILLE P.O., ONT.

66876—Ties	$305 41	
68065—Posts	15 80	
68597—Ties	57 54	
		$378 75

JOURNAL PRINTING COMPANY OF ST. THOMAS, ST. THOMAS, ONT.

66992—Advertising	$1 40	
70216— "	9 60	
		$11 00

P. H. JORY, LIMITED, HAILEYBURY, ONT.

67799—Claim No. 13431, damage to toilet water	$ 54	
		$ 54

JONES BROTHERS & COMPANY, LIMITED, TORONTO, ONT.

68175—Counter	$540 00	
		$540 00

A. B. JARDINE & COMPANY, HESPELER, ONT.

68185—Ratchet wheel	$4 13	
		$4 13

A. J. JACKSON, COCHRANE, ONT.

68000—Donation *re* alleged injury	$200 00	
		$200 00

W. W. JOHNSTON, OTTAWA, ONT.

68620—Expense account delayed train	$8 50	
		$8 50

D. H. JACOBI & COMPANY, HAILEYBURY, ONT.

68092—Moving load result collision	$78 75	
		$78 75

A. JENSON, PORQUIS JUNCTION, ONT.

65938—Award W. C. B. *re* alleged injuries	$12 78	
		$12 78

J. Johnson, Redwater, Ont.

68952—Expenses	$2 50	
		$2 50

Allan Johnson, Kenabeek, Ont.

70025—Award W. C. B. *re* alleged injury	$28 61	
		$28 61

Duncan Johnson, New Liskeard, Ont.

70036—Claim No. 15847, damage to baggage	$4 00	
		$4 00

Thos. Jacobs, Temagami, Ont.

70938—Expenses	$2 75	
		$2 75

J. G. G. Kerry, Toronto, Ont.

63237—Fee as consulting engineer, November, 1916	$83 34	
63864— " " " December, 1916	83 33	
64675— " " " January, 1917	83 33	
65402— " " " February, 1917	83 33	
66187— " " " March, 1917	83 33	
66652— " " " April, 1917	83 33	
67639— " " " May, 1917	83 33	
67940— " " " June, 1917	83 33	
68837— " " " July, 1917	83 33	
69358— " " " August, 1917	83 33	
70091— " " " September, 1917	83 33	
70566— " " " October, 1917	83 33	
		$999 97

The Knechtel Furniture Company, Limited, Hanover, Ont.

63281—Office furniture	$77 18	
64078— " "	29 40	
65504— " "	29 40	
66291— " "	16 66	
66904— " "	63 21	
67713— " "	21 56	
67917— " "	192 57	
68010— " "	23 72	
70367— " "	6 37	
		$460 07

The H. Krug Furniture Company, Limited, Kitchener, Ont.

63335—Office furniture	$5 00	
66579— " "	6 86	
66906— " "	5 88	
67919— " "	5 88	
68022— " "	6 86	
71266— " "	7 10	
		$37 58

Kentucky & Indiana Terminal Railroad Company, Louisville, Ky.

63501—Car repairs	$1 30	
64238— "	1 41	
65805— "	1 47	
65766— "	54	
68995— "	3 31	
69680— "	65	
71117— "	1 11	
70794— "	3 42	
		$13 21

D. Kerrigan, Englehart, Ont.

63567—Expenses	$2 20	
64112— "	3 20	
65618— "	7 05	
66411— "	3 00	
66958— "	8 10	
67773— "	12 34	
68186— "	8 75	
68943— "	8 50	
69626— "	11 89	
70339— "	7 96	
70902— "	2 80	
		$75 79

Karn-Morris Piano & Organ Co., Limited, Woodstock, Ont.

63709—Claim No. 12853, loss piano, forest fires	$325 00	
		$325 00

Rebecca Kennedy, North Bay, Ont.

63715—Laundry	$22 89	
65034— "	20 58	
65421— "	20 37	
66454— "	16 98	
66629— "	17 85	
67256— "	17 94	
68136— "	18 09	
68854— "	16 77	
69417— "	17 19	
70218— "	17 16	
70665— "	1 10	
71159— "	16 65	
71256— "	16 89	
		$220 46

W. J. Kelly, S. of T. & T., North Bay, Ont.

63865—Travelling expenses	$9 85	
65133— " "	6 75	
65736— " "	16 70	
66681— " "	24 60	
67296— " "	14 35	
68055— " "	10 00	
68514— " "	3 50	
69419— " "	14 95	
70062— " "	9 55	
70903— " "	20 05	
70994— " "	10 75	
		$141 05

H. Kideckel, Timmins, Ont.

64319—Claim No. 12899, loss milk	$4 55	
		$4 55

Kentwood & Eastern Railways Company, Kentwood, La.

64463—Car service balance	$5 85	
		$5 85

Kansas City, Mexico & Orient Railway Company, San Angelo, Texas.

64613—Car repairs	$ 47	
66352—Car service balance	1 50	
67395— " "	7 50	
68711— " "	15 00	
69863— " "	3 00	
		$27 47

KAUSTINE COMPANY, LIMITED, TORONTO, ONT.

64544—Kaustine System model	$61 75	
65353— " equipment	358 25	
66462—Ventilator cap, etc.	10 57	
66527—Kaustine	30 00	
67837—Iron tank and funnel jackets	215 65	
68334—Kaustine	30 00	
69098—Plumbing supplies	528 06	
		$1,234 28

KING EDWARD HOTEL, ENGLEHART, ONT.

64692—Claim No. 12376, loss brandy	$1 10	
64821—Board and lodging supplied engineering party	3 00	
67990— " " " " "	4 80	
68236— " " " " "	4 50	
68968— " " " " "	78 00	
69971— " " " " "	4 50	
70257— " " " " "	10 00	
		$105 90

KARAM DRY GOODS COMPANY, COCHRANE, ONT.

64694—Claim No. 12510, loss dry goods	$97 20	
65856— " 13907, rebate account of fire sufferers	110 82	
70427— " 15504, shortage coffee and whiskey	6 50	
		$214 52

FRANK KRUGER, KRUGERSDORF, ONT.

64696—Claim No. 11567, overcharge weight pulpwood	$27 59	
		$27 59

KERRY & CHASE, LIMITED, TORONTO, ONT.

64786—Services rendered	$201 90	
64940— " "	227 40	
66498— " "	78 12	
		$507 42

KENNEDY BROTHERS, UTICA, N.Y.

65355—Memo. book	$1 25	
66369—Inserts	3 75	
69647—Memo. books	16 00	
		$21 00

KNIGHT BROS. COMPANY, LIMITED, BURK'S FALLS, ONT.

65723—Rebates, private siding	$9 17	
66158—Claim No. 13775, loss sacks	5 00	
66529—Flooring	57 78	
67227— "	146 43	
67566— "	79 28	
		$297 66

THE KANSAS CITY SOUTHERN RAILWAY COMPANY, KANSAS CITY, MO.

65935—Car repairs	$4 33	
66109—Car service balance	7 80	
68537—Car repairs	2 16	
68709—Car service balance	8 25	
68808—Car repairs	10 90	
		$33 44

KING'S PRINTER, TORONTO, ONT.

65502—Half tones for Annual Report	$49 31	
		$49 31

S. Kroch & Company, Iroquois Falls, Ont.

65858—Claim No. 12465, overcharge freight canned goods.....	$3 69	
		$3 69

Knight Bros. & McKinnon, Limited, Cobalt, Ont.

66531—Repairs to table, Cobalt Telegraph	$1 13	
68146—Rebate, private siding	187 34	
		$188 47

W. A. Kribbs, Hespeler, Ont.

66847—Claim No. 11451, overcharge on lumber	$13 82	
		$13 82

Kanawha & Michigan Railway Company, Columbus, Ohio.

67078—Car repairs	$1 98	
		$1 98

H. I. Kert, Englehart, Ont.

67272—Meals supplied	$17 40	
		$17 40

Krug Brothers Company, Limited, Chesley, Ont.

67801—Claim No. 14081, loss dresses	$79 20	
		$79 20

The Kerr Engine Company, Limited, Walkerville, Ont.

68332—Hydrant parts	$15 50	
		$15 50

J. Kitchen, Monteith, Ont.

68388—Ties	$273 03	
70224— "	94 00	
		$367 03

H. Kelly, Cobalt, Ont.

68997—Claim No. 14426, loss riding breeches	$5 00	
		$5 00

Knox Bros., Montreal, Que.

69211—Claim No. 14483, overcharge lumber	$10 36	
		$10 36

Con. Kenelly, Cobalt, Ont.

69976—Unloading damaged car of explosives	$27 00	
		$27 00

Kavanagh Brothers, Ottawa, Canada.

70271—Groceries	$20 39	
		$20 39

Geo. W. Lee, North Bay, Ont.

63239—Salary, November, 1916	$208 33	
63373—Expenses	7 50	
63866—Salary, December, 1916	208 34	
63904—Honorarium for quarter ending December 31st, 1916	250 00	
64060—Expenses	18 76	

GEO. W. LEE, NORTH BAY, ONT.—*Continued.*

64677—Salary, January, 1917	208 33	
64855—Expenses	21 25	
65404—Salary, February, 1917	208 33	
65564—Expenses	15 50	
66169—Honorarium for quarter ending March 31st, 1917	250 00	
66189—Salary, March, 1917	208 34	
66333—Expenses	26 70	
66656—Salary, April, 1917	208 33	
66806—Expenses	13 50	
67894—Repairs, automobile	72 90	
67641—Salary, May, 1917	208 33	
67763—Expenses	18 50	
67942—Salary, June, 1917	208 33	
67970—Honorarium for quarter ending June 30th, 1917	250 00	
68380—Expenses	18 00	
68833—Salary, July, 1917	208 33	
68945—Expenses	24 00	
69338—Salary, August, 1917	208 33	
69500—Expenses	23 50	
70093—Salary, September, 1917	208 33	
70207—Honorarium for quarter ending September 30th, 1917	250 00	
70307—Expenses	24 00	
70568—Salary, October, 1917	208 35	
70678—Expenses	25 25	
		$3,809 30

F. W. LOVE, KENABEEK P.O., ONT.

63295—Ties	$165 06	
65159— "	32 79	
66106— "	12 00	
		$209 85

MRS. A. LALONDE, NORTH BAY, ONT.

63403—Groceries	$7 78	
66744— "	2 78	
69331— "	12 70	
69723—	7 62	
		$30 88

LOUISVILLE & NASHVILLE RAILROAD COMPANY, LOUISVILLE, KY.

63503—Car repairs	$8 12	
64467—Car service balance	32 85	
64242—Car repairs	20 02	
65190—Car service balance	39 60	
65807—Car repairs	4 72	
66031—Car service balance	83 85	
65768—Car repairs	1 62	
66356—Car service balance	29 25	
66719—Car repairs	8 74	
67399—Car service balance	17 25	
67720— " "	2 00	
67876—Car repairs	1 42	
68482— "	3 95	
69224—Car service balance	25 65	
68999—Car repairs	50	
70418—Car service balance	12 60	
71121—Car repairs	124 11	
70798— "	11 79	
71526—Car service balance	22 20	
		$450 24

W. R. Lowery, Cobalt, Ont.

63713—Claim No. 11708, loss salted peanuts	$1 22	
64325— " 12324, loss tobacco	66 48	
64335— " 12390, loss tobacco	77 04	
64736— " 12393, loss tobacco	74 74	
64698— " 12276, loss cream bars	1 20	
64876— " 12276, loss tobacco	25 64	
64973— " 13221, loss chocolates	4 59	
69215—Claims Nos. 14976 and 14999, loss confectionery and cigarettes	5 32	
69507—Claims, loss tobacco, etc.	20 62	
70001—Claim No. 14977, loss lemonade	1 49	
69586—Claims, loss tobacco, etc.	53 71	
70429—Claim No. 14975, shortage cakes	5 99	
70621— " 16000, fruit jars broken	6 16	
71253— " 15373, loss orangeade	1 49	
		$345 69

The Lightning Polish Company, Petrolia, Ont.

63899—Enamel and metal polish	$14 40	
66501— " " "	13 20	
67568— " " "	57 60	
		$85 20

L'Air Liquide Society, West Toronto, Ont.

63897—Acetylene, etc.	$11 92	
64207—Oxygen, etc.	48 52	
64550—Freight charges	13 37	
65359—Oxygen and acetylene	35 00	
65638—Freight charges	11 56	
66210—Oxygen	27 53	
66371— "	35 15	
66607— "	75 98	
67229—Oxygen, etc.	42 50	
67570— "	386 32	
67839—Oxygen and cartage	76 63	
68187—Cartage	1 51	
68407—Oxygen	77 18	
68540— "	113 24	
69100—Cartage	25	
69369—Oxygen, etc.	103 07	
69973— "	12	
69898— "	53 89	
70571—Oxygen	25 32	
70779— "	79 73	
71108— "	24 60	
71310— "	4 03	
		$1,247 42

S. Laisel, Cochrane, Ont.

64007—Travelling expenses	$6 40	
64700— " "	4 10	
65135— " "	5 60	
65738— " "	6 05	
66683— " "	14 75	
67298— " "	4 80	
68057— " "	12 10	
68518— " "	9 70	
69421— " "	11 95	
70068— " "	14 30	
70905— " "	23 80	
70996— " "	26 70	
		$140 25

THE LAMBTON CREAMERY CO., LTD., PETROLIA, ONT.

64209—Butter	$157 50	
64546— "	43 70	
66471— "	19 35	
68195— "	38 70	
68409— "	19 35	
68658— "	35 10	
69894— "	17 10	
70759— "	19 35	
		$350 15

LINDSAY & MCCLUSKEY, NORTH BAY, ONT.

64211—Lime	$19 20	
65472—Ice	3,873 60	
66470—Lime	70	
68491— "	19 75	
69896— "	31 85	
70761—Lime bags	42 50	
		$3,987 60

H. LAFRANCE, GOWGANDA, ONT.

64321—Claim No. 12651, loss account shortage eggs	$10 05	
		$10 05

MRS. A. LACHANCE, IROQUOIS FALLS, ONT.

64323—Claim No. 12283, lard, eggs, etc., used for relief of fire sufferers	$27 50	
67859—Claim No. 12803, loss milk	4 60	
70038— " 15557, loss potatoes	5 00	
71249— " 15407, loss peaches	2 98	
		$40 08

LEHIGH VALLEY RAILROAD, PHILADELPHIA, PA.

64465—Car service balance	$211 05
64571—Commission	1 38
64615—Car repairs	9 37
64240— "	22 18
64388—Claim	4 99
64960— "	11 49
65188—Car service balance	197 55
65282—Ticket balance	27 77
65358—Commission	1 30
65753— "	26
65969—Car repairs	21 38
66029—Car service balance	123 15
65620—Cars destroyed by fire of July, 1916	1,045 60
65848—Car service balance	32 40
66054—Claim No. 7698	9 16
66354—Car service balance	204 75
66464—Car repairs	15 70
66975— "	76
67397—Car service balance	164 25
67531—Commission	1 30
67796—Car service balance	132 66
67814—Car repairs	23 47
67866—Ticket balance	4 40
68715—Car service balance	302 72
68024—Car repairs	2 68
68702— "	6 72
68072—Interline freight balance	32 28
69222—Car service	203 56
69865—Car service balance	94 20
69712—Claim No. 15374, overcharge weight ore	15 22

LEHIGH VALLEY RAILROAD, PHILADELPHIA, PA.—*Continued.*

70182—Commission	47	
70484—Car service balance	53 40	
70457—Commission	64	
71001—Car service balance	205 80	
71119—Car repairs	20 45	
71323—Interline freight balance	64 26	
70796—Car repairs	12 91	
71524—Car service balance	125 12	
71666—Car repairs	5 78	
		$3,412 53

LOUISIANA & ARKANSAS RAILWAY CO., TEXARKANA, ARK.

64469—Car service balance	$10 40	
66033— " "	6 75	
67062—Car repairs	1 31	
69226—Car service balance	60	
71530— " "	1 80	
		$20 86

LAKE ERIE & WESTERN RAILROAD COMPANY, INDIANAPOLIS, IND.

64617—Car repairs	$2 16	
64138— "	69	
65937— "	3 23	
68565— "	26	
69734— "	1 00	
71123— "	3 20	
		$10 54

LIBRARY BUREAU, TORONTO, ONT.

63988—Stationery supplies	$5 25	
65111— " "	1 60	
66590— " "	4 20	
66931— " "	4 20	
66734— " "	13 25	
68333— " "	72	
		$29 22

THE LABOR NEWS PUBLISHING COMPANY LIMITED, HAMILTON, CANADA.

63990—Advertising	$15 00	
		$15 00

W. H. LEWIS, HAILEYBURY, ONT.

64140—Registrar's fees	$1 03	
68559— "	30	
70528— "	2 05	
		$3 38

E. LALONDE, NORTH BAY, ONT.

64312—Travelling expenses	$5 60	
65009— " "	5 60	
		$11 20

LAWSON MANUFACTURING COMPANY, CHICAGO, ILL.

64548—Hinges	$13 38	
		$13 38

T. A. LALONDE, NUSHKA, ONT.

64874—Claim No. 12374, loss groceries	$40 76	
		$40 76

LEHIGH & NEW ENGLAND RAILROAD CO., SOUTH BETHLEHEM, PA.

65192—Car service balance	$4 95	
66111— " "	8 85	
66358— " "	4 50	
67850— " "	7 00	
68713— " "	9 00	
69220— " "	8 40	
69867— " "	6 60	
70486— " "	14 40	
71532— " "	2 40	
		$66 10

P. B. LARRIVERE, PORQUIS JUNCTION, ONT.

65292—Claim No. 13286, loss potatoes	$6 50	
		$6 50

WALTER LITTLE, SWASTIKA, ONT.

64823—Teaming	$7 50	
67607— "	8 00	
69153—Claim No. 13980, damage to stove	4 00	
		$19 50

P. T. LEGARE, LIMITED, QUEBEC, QUE.

65059—Claim No. 13369, loss buggy pole	$9 25	
66873— " 14082, damage to mower	12 75	
		$22 00

E. LEONARD & SONS, LIMITED, LONDON, ONT.

65357—Smoke stacks	$712 00	
		$712 00

THE G. R. LOCKER COMPANY, MONTREAL, QUE.

65457—Gauge glasses	$11 52	
66533— " "	37 44	
68543— " "	5 27	
		$54 23

P. C. LARKIN & COMPANY, TORONTO, ONT.

65667—Claim No. 13509, loss tea	$31 88	
		$31 88

LONDON & PORT STANLEY RY., LONDON, ONT.

65971—Car repairs	$1 91	
		$1 91

R. L. LAMB, NORTH BAY, ONT.

65562—Travelling expenses	$5 00	
69217— " "	1 80	
69808— " "	5 15	
70543— " "	5 55	
		$17 50

LOUISIANA RAILWAY & NAVIGATION COMPANY, SHREVEPORT, LA.

65666—Car repairs	$14 99	
		$14 99

R. E. Lalonde, Cochrane, Ont.

65698—Claim No. 13015, loss maple syrup	$1 35	
66331— " 13016, loss molasses and sugar	45 00	
67817— " 13774, damage tub	1 35	
69511— " 14726, loss syrup	4 15	
69588— " 14997, loss biscuits	2 34	
70268— " 14206, loss confectionery	27 55	
		$81 74

R. Laidlaw Lumber Company, Limited, Toronto, Ont.

66466—White pine	$583 48	
68656—Lumber	1,068 29	
		$1,651 77

London Rolling Mills Company, Limited, London, Ont.

66468—Iron	$102 38	
		$102 38

Jas. C. McD. Leitch, Timmins, Ont.

66283—Travelling expenses	$18 00	
		$18 00

Lowe Brothers, Limited, Toronto, Ont.

66313—Paints	$112 21	
67080— "	29 55	
69388— "	170 27	
69644— "	176 40	
70602— "	88 20	
		$576 63

Thomas J. Lipton, Toronto, Ont.

66875—Claim No. 13699, loss tea	$19 50	
68037—Expenses *re* delayed train	7 50	
71228—Claim No. 16089, loss tea	6 60	
		$33 60

C. Lagrow, Cane P.O., Ont.

67255—Ties	$26 28	
		$26 28

E. & X. Laframboise, North Cobalt, Ont.

67255—Ties	$1,225 36	
68597— "	538 16	
68597—Switch sets	144 72	
68597—Ties	122 31	
68946— "	45 00	
68946— "	45 00	
		$2,120 55

Lake Erie, Franklin & Clarion Railroad Co., Franklin, Pa.

67401—Car service balance	$5 25	
67722— " "	27 75	
		$33 00

London Guarantee & Accident Co., Ltd., Toronto, Ont.

67553—Premiums	$113 94	
		$113 94

LOUISIANA WESTERN RAILWAY CO., NEW ORLEANS, LA.

67569—Car repairs	$2 14	
67979— "	3 38	
		$5 52

J. H. LEVER, NEW LISKEARD, ONT.

66780—Claim No. 14336, repairs to motor boat	$15 00	
		$15 00

GEORGE H. LEIGH, MATHESON, ONT.

67322—Claim No. 13368, loss of dry goods	$6 90	
		$6 90

LABOR DIRECTORY, TORONTO, ONT.

66994—Advertising	$10 00	
		$10 00

R. A. LISTER & COMPANY, LIMITED, TORONTO, ONT.

67332—Claim No. 14153, loss colonial closet	$10 00	
		$10 00

LACROIX & MORRISSETTE, COCHRANE, ONT.

67358—Claim No. 14099, damage to candy	$ 65	
		$ 65

R. G. LONG & COMPANY, LIMITED, TORONTO, ONT.

67508—Claim No. 14870, damage to baggage	$54 19	
		$54 19

E. P. LEACH, HAILEYBURY, ONT.

67590—Award W. C. B. re alleged injuries	$22 73	
		$22 73

LEVIS FERRY COMPANY, LEVIS, QUE.

67856—Ticket balance	$ 15	
		$ 15

JOHN LUNDIE, NEW YORK, N.Y.

67747—Tie plates	$1,875 57	
		$1,875 57

LUKE BROTHERS, LIMITED, MONTREAL, QUE.

67753—Trees, etc.	$278 25	
		$278 25

THE LAKE TEMISKAMING NAVIGATION COMPANY, HAILEYBURY, ONT.

67819—Claim No. 14084, damage to bed springs	$5 00	
68266— " 14083, damage to stove	6 00	
		$11 00

THE M. LANGMUIR MANUFACTURING COMPANY OF TORONTO, LIMITED, TORONTO, ONT.

67861—Claim No. 13301, loss trunks	$66 85	
		$66 85

E. LANSALL, BOURKE'S P.O., ONT.

68065—Ties	$61 69	
		$61 69

MRS. L. LAFRANGE, COBALT, ONT.

68361—Claim No. 14665, damage to rocker	$1 30	
		$1 30

LEGAULT HARDWARE COMPANY, CHARLTON, ONT.

68411—Claim No. 14597, damage to paper	$9 90	
70270— " 15508, damage to churns	2 63	
		$12 53

DEXTER P. LILLIE COMPANY, INDIAN ORCHARD, MASS.

68525—Waste	$320 62	
69367— "	322 58	
		$643 20

LOCOMOTIVE SUPERHEATER COMPANY, NEW YORK, N.Y.

68558—Bends, copper gaskets	$320 00	
		$320 00

FRANK LAFLAME, NORTH BAY, ONT.

68076—Award W. C. B. *re* alleged injury	$6 14	
		$6 14

JOSEPH LEDUC, RAMORE, ONT.

68068—Groceries	$5 43	
		$5 43

H. LAWRENCE, HEASLIP, ONT.

68730—Ties	$9 27	
69642— "	3 90	
		$13 17

J. LIBBY, CANE, ONT.

68730—Ties	$83 21	
68946— "	35 10	
		$118 31

LOWE-MARTIN COMPANY, LIMITED, TORONTO, ONT.

68972—Stationery supplies	$11 63	
70228— " "	7 68	
		$19 31

J. LEGREE, COBALT, ONT.

69213—Claim No. 14456—Damage to dressing case	$5 00	
		$5 00

THE JOSEPH LAY COMPANY, RIDGEVILLE, INDIANA.

69333—Brooms	$4 10	
		$4 10

J. H. LENG, NEW LISKEARD, ONT.

69505—Claim No. 14850—Shortage cornmeal	$2 58	
70040— " 15262— " candy	3 04	
70619— " 15509—Loss corn flakes	3 40	
		$9 02

R. C. Lowery, Englehart, Ont.

69509—Claim No. 15406, loss oil ..... $ 96 — $ 96

G. Lato, North Bay, Ont.

69544—Travelling expenses ..... $14 00 — $14 00

J. B. Lariviere, Cochrane, Ont.

69590—Claim No. 13459—Loss H. H. goods ..... $60 00 — $60 00

H. K. Lowery, Monteith, Ont.

69868—Claim No. 13716—Loss clothing, etc. ..... $18 00 — $18 00

Louisville, Henderson & St. Louis Rly. Company, Louisville, Ky.

70420—Car service balance ..... $ 60 — $ 60

Mrs. H. Leng, New Liskeard, Ont.

70831—Milk ..... $1 40 — $1 40

J. A. Lalonde, Cobalt, Ont.

71251—Claim No. 14100—Loss fish ..... $3 75 — $3 75

Xavier Leroux, Casselman, Ont.

71255—Claim No. 16174—Loss clothing ..... $7 00 — $7 00

A. L. Lye, North Bay, Ont.

70774—Travelling expenses ..... $1 90 — $1 90

H. Leeman, North Cobalt, Ont.

71230—Claim No. 14247—Damage to butter ..... $11 70 — $11 70

Lewis Brothers, Limited, Montreal, Que.

71268—Locks, etc. ..... $66 34 — $66 34

Lehigh & Hudson River Railway, Warwick, N.Y.

71528—Car service balance ..... $1 20 — $1 20

Miss M. Molyneaux, Cobalt, Ont.

63233*a*—	Salary,	November, 1916	$65 00
63860—	"	December, 1916	65 00
64683—	"	January, 1917	65 00
65408—	"	February, 1917	65 00
66181—	"	March, 1917	65 00
66660—	"	April, 1917	65 00
67633—	"	May, 1917	65 00

MISS M. MOLYNEAUX, COBALT, ONT.—*Continued.*

67952—Salary, June, 1917		65 00	
68831— " July, 1917		65 00	
69350— " August, 1917		65 00	
70085— " September, 1917		65 00	
70558— " October, 1917		65 00	
			$780 00

W. H. MAUND, SEC.-TREAS., TORONTO, ONT.

63243—Payrolls—Toronto Staff	$425 00	
63263— " " "	1,150 00	
63323—Office expenses	55 27	
63868—Payrolls—Toronto Staff	502 81	
63898— " " "	50 48	
63908— " " "	1,075 00	
63964—Office expenses	54 45	
64709— " "	44 70	
64833—Payrolls—Toronto Staff	1,075 00	
64835— " "	490 00	
64903—Office expenses	27 90	
65394—Payrolls—Toronto Staff	1,010 00	
65410— " " "	742 66	
65506—Office expenses	50 00	
66171—Payrolls—Toronto Staff	961 80	
66183— " " "	556 00	
66207—Office expenses	49 58	
66321— " "	60 22	
66642—Payrolls—Toronto Staff	1,002 00	
66658— " "	454 58	
66804—Office expenses	47 50	
67627—Payrolls—Toronto Staff	928 00	
67643— " " "	706 50	
67725—Office expenses	50 00	
67958—Payrolls—Toronto Staff	625 15	
67972— " " "	928 00	
67996—Office expenses	60 05	
68821—Payrolls—Toronto Staff	970 05	
68851— " " "	683 10	
68865—Office expenses	55 36	
68911— " "	27 15	
69340—Payrolls—Toronto Staff	935 05	
69360— " " "	667 02	
69374—Office expenses	47 05	
69416— " "	33 80	
70095—Payrolls—Toronto Staff	692 23	
70209— " " "	935 05	
70259—Office expenses	57 60	
70546—Payrolls—Toronto Staff	932 45	
70570— " " "	764 93	
70582—Office expenses	47 90	
70776— " "	49 50	
		$20,080 89

DR. H. H. MOORE, TIMMINS, ONT.

63249—Award W. C. B. *re* injuries, C. Celestine	$22 41	
63962— " " " "	29 88	
65592— " " " "	29 88	
66631— " " " "	17 43	
		$99 60

MURRAY-KAY, LIMITED, TORONTO, ONT.

63267—Linoleum	$174 50	
		$174 50

THE METHODIST BOOK AND PUBLISHING HOUSE, TORONTO, ONT.

63293—Printing, etc.		$12 00	
64006— "		28 00	
65307— "		430 50	
66487— "		15 00	
67675— "		23 50	
68201— "		25 00	
70696— "		60 35	
			$594 35

WILLIAM MANN COMPANY, PHILADELPHIA, PA.

63405—Stationery supplies		$17 50	
66375— " "		40 00	
			$57 50

MIGHT DIRECTORIES, LIMITED, TORONTO, ONT.

63443—Addressing envelopes		$15 80	
65113—Clippings		35	
65900— "		60	
66483—Directory		10 00	
66609—Clippings		25	
68203— "		25	
67994—Mimeographing		5 60	
68630—Clippings		15	
			$33 00

THE MAIL & EMPIRE, TORONTO, ONT.

63445—Subscription		$3 00	
66485—Advertising		36 00	
70227— "		150 00	
			$189 00

MAINE CENTRAL RAILROAD COMPANY, PORTLAND, ME.

63487—For value of box cars destroyed, fires, July, 1916		$1,868 22	
65198—Car service balance		7 20	
65987—Ticket balance		2 24	
66039—Car service balance		9 60	
66364— " "		16 75	
66723—Car repairs		1 94	
67981— "		1 28	
68719—Car service balance		9 50	
68803—Ticket balance		15 54	
68170—Car repairs		19 92	
69230—Car service balance		38 70	
69453—Car repairs		8 74	
69871—Car service balance		117 00	
69676—Car repairs		4 52	
70424—Car service balance		21 45	
71005— " "		109 80	
71131—Car repairs		42	
64475—Car service balance		12 90	
70802—Car repairs		2 06	
71534—Car service balance		42 60	
			$2,310 38

MOBILE & OHIO RAILROAD COMPANY, MOBILE, ALA.

63505—Car repairs		$ 06	
64479—Car service balance		9 45	
64248—Car repairs		1 13	
66043—Car service balance		15 15	
65770—Car repairs		3 98	

MOBILE & OHIO RAILROAD COMPANY, MOBILE, ALA.—*Continued.*

66368—Car service balance	29 25	
66837—Car repairs	9 50	
67407—Car service balance	33 00	
67573—Car repairs	78	
67728—Car service balance	1 50	
67818—Car repairs	68	
68563— "	3 91	
68725—Car service balance	26 10	
69238— " "	33 45	
69001—Car repairs	65	
69875—Car service balance	5 40	
69686—Car repairs	3 13	
70426—Car service balance	1 20	
71129—Car repairs	5 06	
70804— "	3 67	
		$187 05

MINNEAPOLIS & ST. LOUIS RAILROAD COMPANY, MINNEAPOLIS, MINN.

63507—Car repairs	$16 29	
64481—Car service balance	5 40	
64621—Car repairs	72	
65202—Car service balance	4 95	
66045— " "	35 10	
65772—Car repairs	62	
65966— "	13	
66370—Car service balance	7 50	
67409— " "	16 00	
67730— " "	24 45	
68727— " "	17 25	
68805— " "	5 51	
68812—Car repairs	4 06	
69236—Car service balance	3 55	
69877— " "	2 40	
70428— " "	10 80	
71009— " "	5 25	
		$159 98

MINNEAPOLIS, ST. PAUL & SAULT STE. MARIE RAILWAY, MINNEAPOLIS, MINN.

63509—Car repairs	$14 17	
64471—Car service balance	45	
64390—Claims	10 91	
65194—Car service balance	23 40	
65039—Claims	13 72	
65153— "	2 72	
65821—Car repairs	16 57	
66035—Car service balance	37 80	
66362— " "	77 70	
66436—Ticket balance	14 56	
66449—Claims	3 31	
67053—Car repairs	2 41	
67403—Car service balance	121 35	
67338—Claims	25 72	
67724—Car service balance	61 50	
67820—Car repairs	26	
68717—Car service balance	36 90	
69140—Ticket balance	31 57	
69228—Car service balance	43 20	
69316—Claims	6 40	
69223— "	24 04	
69679—Car repairs	53 24	
69869—Car service balance	11 85	
69726—Car repairs	4 77	
70152—Claim	3 17	
71307— "	35 13	
		$676 82

MISSOURI, KANSAS & TEXAS LINES, DALLAS, TEXAS.

63511—Car repairs	$3 84	
64244— "	1 38	
65036— "	96	
65200—Car service balance	6 75	
65326—Cars destroyed by fire, July, 1916	538 86	
66041—Car service balance	31 50	
65824—Car repairs	1 90	
65968— "	5 35	
66366—Car service balance	39 00	
66438—Ticket balance	36 24	
67405—Car service balance	71 85	
67044—Car repairs	56	
67848—Car service balance	25 25	
67852— " "	2 25	
67886—Car repairs	6 83	
68723—Car service balance	57 75	
68731— " "	10 50	
68164—Car repairs	1 96	
69234—Car service balance	7 65	
68618—Car repairs	25	
69681— "	6 10	
69873—Car service balance	4 20	
70116—Car repairs	48	
70488—Car service balance	47 40	
71007— " "	26 40	
71536— " "	8 60	
71668—Car repairs	6 41	
		$950 22

F. J. MARTYN, NORTH BAY, ONT.

63569—Funeral expenses *re* late Edward Osborne	$48 00	
70045— " " L. M. Ferguson	67 00	
		$115 00

H. MARTIN, NORTH BAY, ONT.

63605—Expenses	$31 10	
64654— "	30 40	
65011— "	33 20	
65926— "	34 25	
70072— "	5 50	
70459— "	28 00	
70890— "	40 50	
		$202 95

MATTHEWS BROTHERS, LIMITED, TORONTO, ONT.

63725—Claim No. 12105—Damage to glass	$3 28	
		$3 28

MATTHEWS, BLACKWELL, LIMITED, TORONTO, ONT.

63755—Claim No. 12851—Loss meats and butter	$103 00	
67241— " 14303—Meat damaged	14 15	
		$117 15

WM. MILNE & SON, LTD., NORTH BAY, ONT.

63901—Lath	$22 50	
69339—Lumber	663 52	
69922— "	1,963 51	
70769— "	606 02	
71354—Repairs to band saw	3 00	
		$3,258 55

W. H. Miner, Chicago, Ill.

63905—Miner friction gear	$400 00	
66996—Castings	214 00	
69341— "	370 20	
		$984 20

E. M. Murphy, Relieving Agent.

63943—Expenses	$13 75	
65535— "	14 00	
66500— "	14 00	
67089— "	9 00	
69057— "	14 00	
69219— "	14 00	
69434— "	14 00	
69982— "	14 00	
70393— "	14 00	
70940— "	21 50	
70982— "	7 25	
		$149 50

Michie & Co., Limited, Toronto, Ontario.

63945—Groceries	$102 33	
65693— "	191 84	
65823— "	1 38	
66995— "	18 24	
69076— "	60	
		$314 39

Mussons, Limited, Montreal, Que.

64031—Wheels	$30 45	
66218—Castings	60 40	
67105—Car replacers	52 00	
67198—Barrows	40 00	
68193—Velocipede parts	13 30	
68924—Feed nuts, etc.	20 30	
70573—Bracket pin, etc.	22 50	
		$238 95

The Herbert Morris Crane & Hoist Co., Ltd., Toronto, Ontario.

64213—Electric hoist	$325 00	
68495—Crane span and parts	736 25	
		$1,061 25

Lady Minto Hospital, New Liskeard, Ont.

64405—Donation	$100 00	
64945—Service rendered J. Astel	4 75	
67274—Attendance, R. T. Connell	66 30	
		$171 05

Missouri Pacific Railway, St. Louis, Mo.

64473—Car service balance	$21 15	
64619—Car repairs	13 40	
64246— "	13 03	
65038— "	14 89	
65196—Car service balance	35 10	
65328—Car destroyed by fire of July, 1916	292 00	
66037—Car service balance	10 50	
65906—Car repairs	9 13	
66616— "	18 39	
67351— "	10 59	
67026—Car repairs	8 08	

MISSOURI PACIFIC RAILWAY, ST. LOUIS, MO.—*Continued.*

68415—Car repairs	22 61	
68780— "	18 28	
69581— "	9 63	
70114— "	10 88	
70422—Car service balance	8 40	
71003— " "	4 80	
71347—Car repairs	20 83	
71670— "	37 19	
		$578 88

MONTOUR RAILROAD, PITTSBURG, PA.

64477—Car service balance	$2 25	
66360— " "	18 75	
67726— " "	14 25	
68721— " "	22 50	
69232— " "	3 30	
		$61 05

MID-WEST DESPATCH, CHICAGO, ILL.

64483—Car service balance	$1 90	
65204— " "	1 90	
		$3 80

R. S. MARSHALL, RELIEVING AGENT.

64543—Expenses	$11 45	
64652— "	30 00	
67030— "	29 00	
68082— "	47 00	
69975— "	30 00	
69760— "	13 00	
70667— "	28 00	
71326— "	21 00	
		$209 45

THE MAP COMPANY, TORONTO, ONT.

63856—Mining plans and binder	$35 00	
		$35 00

DENNIS MURPHY, OTTAWA, ONT.

63906—Honorarium for quarter ended Dec. 31, 1916	$250 00	
66173— " " " March 31, 1917	250 00	
		$500 00

A. W. MITCHELL, HAILEYBURY P.O., ONT.

64286—Ties	$97 96	
		$97 96

MICHIGAN CENTRAL RAILROAD CO., DETROIT, MICH.

64314—Car repairs	$87 06	
65324—Car destroyed by fire, July, 1916	378 04	
65970—Car repairs	12 92	
66725— "	13 63	
67353— "	76 08	
67064— "	74 97	
67983— "	12 15	
68484— "	51 91	
69003— "	81 13	
69947—Interline ticket balance	85	
69682—Car repairs	23 69	

MICHIGAN CENTRAL RAILROAD CO., DETROIT, MICH.—*Continued.*

70154—Claims	2 98	
71071—Interline ticket balance	9 35	
71125—Car repairs	79 69	
70800— "	4 75	
		$909 20

MEAKINS & SONS, LIMITED, HAMILTON, ONT.

64552—Brooms, brushes, etc.	$126 38	
65363—Brushes, etc.	13 97	
66220— "	90 43	
67103— "	51 37	
67234— "	86 94	
67610—Brooms	65 00	
68554—Duster, etc.	34 66	
69725—Brushes	50 65	
69926— "	10 74	
70767— "	56 58	
71352— "	21 35	
		$608 07

MARSH & TRUMAN LUMBER COMPANY, CHICAGO, ILL.

64560—Lumber	$258 16	
69928— "	273 17	
71112— "	350 20	
		$881 53

THE JAMES MORRISON BRASS MFG. CO., LTD., TORONTO, ONT.

64562—Valves, etc.	$163 07	
65365— " "	35 73	
65459—Injector parts	224 75	
66212— " " etc.	221 86	
67196—Globe valves	58 00	
67608—Water gauge, etc.	58 44	
68197—Valves	385 08	
68413—Lifting tubes, etc.	177 87	
68646—Valves	31 36	
69371— " etc.	148 65	
69727— " "	161 85	
69900— "	13 14	
70765—Gauges, etc.	30 68	
71148—Injector	36 00	
71312—Valves	12 21	
		$1,758 69

W. L. MACKIE, NORTH BAY, ONT.

64564—Mattresses	39 00	
		$39 00

THE ROBERT MITCHELL CO., LIMITED, MONTREAL, QUE.

64566—Safety chains, etc.	$14 60	
		$14 60

W. R. MAHER, NORTH BAY, ONT.

64656—Expenses	$28 00	
66225— "	52 30	
69414— "	12 35	
71010— "	18 00	
		$110 65

WM. MAHER, PLACENTIA, NFLD.

64708—Claim No. 10894—Overcharge, freight, trunk	$1 70	
		$1 70

METHODIST CHURCH, COCHRANE, ONT.

64710—Claim No. 13320—Rebate freight charges, account fire loss	$151 23	
		$151 23

MARSHALL-ECCLESTONE, LIMITED, TIMMINS, ONT.

64848—Claim No. 12924—Damage to lamp	$11 83	
64899—Gasoline	15 33	
65257—Claim No. 12103—Damage to brick	5 17	
65862— " 13239—Damage, stamped ware	3 76	
67007— " 13737—Loss turpentine	11 82	
67016—Glass, etc.	90	
68199—Hooks and eyes	50	
68788—Claim No. 14600—Damage, pump	4 84	
70232—Coupling, etc.	75	
70272—Claim No. 14576—Loss oven	2 21	
		$57 11

W. A. MARTYN, NORTH BAY, ONT.

64864—Contract, machine shop, North Bay	$1,073 40	
64777—Refund, deposit on contract	200 00	
69005—Brick	93 50	
		$1.366 90

MONTEITH PULP & TIMBER COMPANY, TORONTO, ONTARIO.

64988—Rebate on private siding	$32 00	
65671—Claim No. 11882—Loss biscuits	10 48	
64680—Rebate on private siding	452 00	
68882—Slabs	19 57	
69322—Rebate, private siding	164 00	
70409— " "	120 00	
		$798 05

MISSOURI RIVER DESPATCH, CHICAGO, ILL.

65206—Car service balance	$1 93	
66047— " "	1 93	
		$3 86

MORRIS & CO. REFRIGERATOR LINE, CHICAGO, ILL.

65208—Car service balance	$5 47	
66049— " "	9 60	
66372— " "	1 93	
		$17 00

THE MONETARY TIMES, TORONTO, ONT.

64697—Advertising	$50 00	
66521—Subscription	3 00	
		$53 00

THE MACLEAN PUBLISHING COMPANY, LIMITED, TORONTO, ONT.

64825—Subscription for *Canadian Machinery*	$3 00	
67687—Advertising	10 50	
		$13 50

MACLURE & LANGLEY, LIMITED, TORONTO, ONT.

64977—Claim No. 13407—Loss jam	$2 04	
		$2 04

R. L. & C. MALKIN, NELLIE LAKE, ONT.

65159—Ties	$124 57	
66106— "	14 00	
68065— "	109 62	
68388— "	264 58	
71221— "	300 00	
		$812 77

THOMAS MAGLADERY, ENGLEHART, ONT.

65235—Claim No. 13633—Damage to casting	$0 63	
66373—Lanterns	4 00	
68962—Hardware supplies	3 83	
		$8 46

J. B. MOYNEUR, OTTAWA, ONT.

65237—Claim No. 12765—Damage to launch	$25 00	
		$25 00

CHAS. C. MILLER, ENGLEHART, ONT.

65611—Award, W. C. B., *re* alleged injuries	$29 42	
65691— " " " "	20 62	
		$50 04

MATTHEWS, TOWERS & COMPANY, LIMITED, MONTREAL, QUE.

65701—Claim No. 13434—Loss, dry goods	$137 80	
		$137 80

THE MONTREAL STAR PUBLISHING CO., LTD., MONTREAL, QUE.

65755—Advertising	$1 50	
67532— "	3 84	
69513— "	9 36	
70805— "	8 40	
		$23 10

MEMPHIS, DALLAS & GULF RAILROAD COMPANY, NASHVILLE, ARK.

65648—Car repairs	$ 61	
		$ 61

MONTPELIER & WELLS RIVER RAILROAD, BOSTON, MASS.

65822—Car repairs	$1 85	
66721— "	1 05	
		$2 90

R. MORRISON, PORQUIS P.O., ONT.

66106—Ties	$185 98	
		$185 98

MOTT COMPANY, LIMITED, MONTREAL, QUE.

66214—Lavatories	$1,210 00	
		$1,210 00

GEORGE MACINTOSH, NORTH BAY, ONTARIO.

66241—Award W. C. B. re alleged injuries	$23 88	
66271— " " " "	6 63	
		$30 51

THE MINES PUBLISHING COMPANY, LTD., TORONTO, ONT.

66651—Advertising	$20 00	
70230— "	15 00	
70870— "	20 00	
		$55 00

H. MUELLER MANUFACTURING CO., LTD., SARNIA, ONT.

66783—Water meter	$81 25	
		$81 25

MORTON, PHILLIPS AND COMPANY, MONTREAL, QUE.

66977—Customs tariff	$1 07	
		$1 07

A. R. MCDOUGALL & COMPANY, TORONTO, ONTARIO.

66979—Pencils	$12 37	
68533— "	3 65	
68060— "	48 00	
		$64 02

MIDLAND VALLEY RAILROAD, MUSKOGEE, OKLA.

67411—Car service balance	$1 50	
67734— " "	3 75	
69773—Car repairs	3 13	
		$8 38

MARYLAND & PENNSYLVANIA R. R. CO., BALTIMORE, MD.

67413—Car service balance	$4 00	
69059— " "	90	
71540— " "	60	
		$5 50

H. H. MACLEAN, NORTH BAY, ONT.

67555—Meals supplied laborers	$9 75	
		$9 75

MACKENZIE & COMPANY, TORONTO, ONTARIO.

66758—Mounting and framing	$2 50	
68036—Framing	75	
70636— "	1 25	
		$4 50

JOHN MITCHELL, THORNLOE P.O., ONT.

66876—Ties	$47 64	
		$47 64

JOHN MORROW SCREW NUT COMPANY, LTD., INGERSOLL, ONT.

67204—Screws	$53 14	
68205— "	2 80	
69373— "	50 06	
		$106 00

MISSISSIPPI CENTRAL RAILROAD, HATTIESBURG, MISS.

67732—Car service balance	$6 75	
68729— " "	6 75	
71011— " "	1 20	
71538— " "	3 00	
		$17 70

MARSHALL & EAST TEXAS RAILWAY, MARSHALL, TEXAS.

67816—Car repairs	$2 31	
69242—Car service	2 85	
		5 16

HUGH C. MACLEAN, LIMITED, TORONTO, ONT.

67715—Advertising	$5 50	
68064—Subscription	2 00	
		$7 50

MASTER CAR BUILDERS' ASSOCIATION, CHICAGO, ILL.

67737—Book of rules	$ 75	
68551—Dues	12 00	
		$12 75

WILLIAM J. MEANEY, HAILEYBURY, ONT.

67803—Claim No. 12975, damage to sheet iron	$25 51	
		$25 51

MORGAN'S LOUISIANA & TEXAS RAILROAD & STEAMSHIP COMPANY, NEW ORLEANS, LA.

67953—Car repairs	$1 25	
69683— "	6 69	
70118— "	12 48	
71127— "	48 69	
		$69 11

A. T. MOTH, COCHRANE, ONT.

68013—Travelling expenses	$1 50	
		$1 50

EDWARD MEEK, TORONTO, ONT.

68339—Settlement *re* alleged personal injuries W. R. Belden....	$90 00	
		$90 00

MISSOURI & NORTH ARKANSAS RAILROAD, HARRISON, ARK.

68417—Car repairs	$7 93	
69240—Car service	3 15	
69879— "	11 40	
		$22 48

N. MONTGOMERY, COCHRANE, ONT.

68427—Claim No. 13892, loss confectionery	$13 66	
		$13 66

MAINTENANCE OF WAY COMMITTEE, TEMAGAMI, ONT.

67984—Expenses	$15 00	
		$15 00

MacRea's Blue Book Company, Chicago, Ill.

68158—Copy MacRea's blue book	$1 00	
69343— " "	2 00	
		$3 00

George Morrison, Callander, Ont.

68669—Bread	$ 88	
		$ 88

Maxwell's, Limited, St. Mary's, Ont.

68654—Mower	$4 70	
		$4 70

H. S. Malkin, Charlton, Ont.

68388—Ties	$377 49	
69558—Claim No. 15342, shortage cornmeal	1 29	
		$378 78

MacKenzie, Mann & Company, Toronto, Ont.

68926—Refund duplicate payment	$3 87	
		$3 87

Miller Chemical Engine Company, Chicago, Ill.

69024—Seals	$14 40	
		$14 40

William Munro, Haileybury, Ont.

68873—Award W. C. B. *re* alleged injuries	$30 94	
69978— " " " "	65 00	
		$95 94

D. T. Millard, North Bay, Ont.

69155—Bread supplied passengers account delayed train	$ 88	
		$ 88

J. A. MacDonald, K.C., Toronto, Ont.

69157—Professional services rendered	$139 25	
		$139 25

G. H. Mead Company, Detroit, Mich.

69225—Claim No. 14817, overcharge pulpwood	$2 75	
71257— " 12526, overcharge pulpwood	15 75	
		$18 50

Manistee & Northeastern Railroad Company, Manistee, Mich.

69881—Car service	$ 15	
		$ 15

Albert Marleau, Widdifield, Ont.

69390—Award W. C. B. *re* alleged injury	$21 68	
		$21 68

R. C. Mortson, Iroquois Falls, Ont.

69436—Expenses	$46 70	
		$46 70

D. S. Merkley, Haileybury, Ont.

69472—Decorating agent's house, Haileybury	$107 70	
		$107 70

James Martin, North Bay, Ont.

69504—Award W. C. B. *re* alleged injuries	$21 00	
69980— " " " "	9 49	
		$30 49

George N. Moore, Timmins, Ont.

69592—Claim No. 15254, overcharge weight car hay	$4 52	
		$4 52

Ivon Mimeault, Sturgeon Falls, Ont.

69594—Claim No. 15186, damage to bureau top	$6 00	
		$6 00

Magnolia Metal Company, Montreal, Que.

69646—Metal	$92 20	
		$92 20

Muscatine, Burlington & Southern R. R. Co., Muscatine, Iowa.

69684—Car repairs	$3 90	
		$3 90

Mason, Gordon & Company, Montreal, Que.

69714—Claim No. 13416, overcharge doors	$175 67	
70032— " 13708, overcharge lumber	10 04	
70958— " 14512, overcharge lumber	47 70	
		$233 41

Charles W. Mould, North Bay, Ont.

70074—Award W. C. B. *re* alleged injuries	$39 46	
70293— " " " "	29 73	
70578— " " " "	19 82	
70632— " " " "	19 82	
70904— " " " "	19 82	
		$128 65

Sam. Marantjis, Cobalt, Ont.

70136—Award W. C. B. *re* alleged injury	$11 55	
		$11 55

Morrow & Beatty, Smooth Rock Falls, Ont.

70150—Claim No. 15911, overcharge car demurrage	$3 00	
		$3 00

A. Morrison, Timmins, Ont.

70274—Claim No. 15141, damage to slabs	$10 00	
		$10 00

Mr. Angus P. MacDonald, Cobalt, Ont.

70461—Refund overpaid on lot, Cobalt	$1 10	
		$1 10

Missouri, Oklahoma & Gulf Rly. Co., Muskogee, Okla.

70649—Car repairs	$2 70	
		$2 70

MINING CORPORATION OF CANADA, LIMITED, COBALT, ONT.

70666—Claim No. 14511, damage to pipe	$16 00	
		$16 00

MRS. W. MONAHAN, MATHESON, ONT.

70930—Wages due A. L. Monahan	$14 50	
		$14 50

A. P. MONETTE, TORONTO, ONT.

71110—Gimp	$1 10	
		$1 10

D. MITCHELL, ENGLEHART, ONT.

71114—Wood	$18 00	
		$18 00

W. MURDOCK, HAILEYBURY, ONT.

71620—Repair work, Haileybury	$6 50	
		$6 50

W. J. MCGUIRE, LIMITED, TORONTO, ONT.

63255—Installing toilet fittings	$9 25	
		$9 25

H. H. MCGEE, NORTH BAY, ONT.

63461—Travelling expenses	$3 70	
64218— " "	34 25	
65013— " "	58 15	
65590— " "	76 85	
67091— " "	61 30	
66808— " "	44 50	
67775— " "	76 55	
68508— " "	36 35	
69061— " "	57 75	
69506— " "	40 40	
70323— " "	44 50	
70680— " "	74 10	
		$608 40

J. M. MCNAMARA, NORTH BAY, ONT.

63667—Legal services	$16 50	
		$16 50

P. MCCOOL, NORTH BAY, ONT.

63669—Piles	$298 80	
65191— "	394 80	
		$693 60

R. MCTAVISH, ENGLEHART, ONT.

63719—Award W. C. B. *re* alleged injuries	$110 52	
		$110 52

DUNC. MCKINNON, COCHRANE, ONT.

63775—Claim No. 12657, alleged loss boots and shoes	$70 20	
		$70 20

J. C. McNabb, Company, Limited, Cobalt, Ont.

71116—Table	$3 00	
63777—Claim No. 12654, damage to bed	8 58	
64742— " 13135, damage to mattress	25 27	
		$36 85

J. McLellan, Englehart, Ont.

63863—Travelling expenses	$14 70	
64702— " "	8 25	
65137— " "	12 95	
65740— " "	8 20	
66685— " "	11 90	
67300— " "	10 60	
68059— " "	12 15	
68250— " "	18 95	
68516— " "	17 70	
69423— " "	19 20	
70070— " "	27 95	
70907— " "	15 10	
70998— " "	18 35	
		$196 00

McColl Brothers & Company, Toronto, Ont.

64215—Soap	$97 80	
66639— "	46 50	
69335— "	50 50	
70575— "	50 00	
		$244 80

W. A. McQuestion, North Bay, Ont.

64237—Award W. C. B. *re* alleged injuries	$29 08	
		$29 08

McKinley-Darragh-Savage Mines, Cobalt, Ont.

64255—Claim No. 12817, overcharge silver ore	$148 91	
66056— " 13051, overcharge, car of coal	6 89	
66502—Coal	185 16	
67390—Claim No. 13966, overcharge on coal	13 30	
		$354 26

William McBride, Heaslip P.O., Ont.

64286—Ties	$8 50	
		$8 50

W. M. McMillan, North Bay, Ont.

64362—Travelling expenses	$16 00	
64905— " "	27 80	
65928— " "	18 55	
66908— " "	33 65	
69221— " "	24 60	
69546— " "	31 40	
70669— " "	9 55	
70892— " "	16 75	
		$178 30

The McClary Manufacturing Company, London & Toronto, Ont.

64554—Stove	$26 70	
65361—Stoves	62 07	
65864—Claim No. 13239, damage to stoves	129 54	
68611— " 14755, loss tinware	10 06	
68648—Stoves	70 40	
		$298 77

McCord Manufacturing Company, Detroit, Mich.

64556—Gaskets	$11 85	
67095— "	10 42	
68066— "	14 22	
		$36 49

J. J. McBurney, North Bay, Ont.

64558—Lumber	$236 77	
65371— "	147 92	
65463—Shims	181 18	
65860—Claim No. 13065, loss of butter	18 36	
66981—Shims	30 00	
		$614 23

Wm. McNabb, Dane, Ont.

64740—Claim No. 12515, alleged loss household goods	$10 00	
		$10 00

J. A. McLeod, North Bay, Ont.

65076—Award W. C. B. *re* alleged injuries	$58 71	
		$58 71

McIntyre-Porcupine Mines, Limited, Schumacher, Ont.

64707—Coal confiscated	$12 00	
		$12 00

E. McGahey, North Bay, Ont.

64841—Travelling expenses	$1 75	
		$1 75

C. E. McDowell, Monteith, Ont.

64975—Claim No. 13415 overcharge weight settlers' effects	$28 13	
		$28 13

A. A. McIntosh, North Bay, Ont.

65367—Beef	$9 35	
66222— "	10 62	
68419— "	28 16	
69924—Groceries	2 25	
71179—Supplies car "Abitibi"	30 23	
		$80 61

J. O. McKerrow, North Bay, Ont.

65420—Travelling expenses	$93 15	
65444— " "	108 95	
65538— " "	94 55	
66201— " "	102 80	
66213— " "	84 95	
66267— " "	105 75	
66305— " "	98 00	
66640— " "	122 10	
67122— " "	44 40	
68341— " "	30 45	
68128— " "	79 60	
68857— " "	83 90	
68869— " "	81 00	
69055— " "	133 25	
69508— " "	92 30	
69762— " "	8 95	
		$1,364 10

MRS. LAURA MCKEE, ELK LAKE, ONT.

65508—Rental telephone lines	$5 00	
65532— " " "	45 00	
		$50 00

MCAUSLAN & ANDERSON, NORTH BAY, ONT.

65646—Services rendered	$60 00	
68255— " "	70 00	
68970— " "	314 80	
71209— " "	98 00	
		$542 80

J. K. MCCONOMY, IROQUOIS FALLS, ONT.

66250—Travelling expenses	$10 00	
		$10 00

B. MCLEOD, CONNAUGHT STATION, ONT.

66504—Beef supplied survey party	$5 00	
		$5 00

WM. MCKELLAR, SHILLINGTON P.O., ONT.

66540—Claim No. 13370, loss household goods, fires July, 1916...	$84 00	
		$84 00

P. L. MCHALE, TIMMINS, ONT.

67258—Repairs to clock	$3 50	
		$3 50

J. P. MCLAUGHLIN, TIMMINS, ONT.

67336—Claim No. 13891, damage to grape fruit	$9 35	
69729—Groceries	7 90	
		$17 25

MCCORD & COMPANY, CHICAGO, ILL.

65465—Journal boxes	$85 80	
66216— " "	122 40	
67138— " "	329 25	
68209— " "	114 00	
69337— " "	139 00	
69920— " "	133 20	
70763— " "	35 00	
		$958 65

D. A. MCCHENSEY, NEW LISKEARD, ONT.

68227—Gasoline	$9 32	
		$9 32

WESLEY MCKNIGHT, NEW LISKEARD, ONT.

68593—Claim No. 13853, loss case of rubbers	$31 20	
69281— " 14754, loss overalls and smock	3 37	
		$34 57

WILLIAM MCDOUGAL, CANE P.O., ONT.

68597—Ties	$28 92	
70224— "	12 20	
		$41 12

J. B. McMURRICH, OSWEGO, N.Y.

68044—Coal	$2,735 41	
68925—Exchange	10 16	
69425—Coal	1,781 74	
69438 "	1,132 20	
		$5,659 51

McFARLANE LADDER WORKS, TORONTO, ONT.

68650—Ladders	$24 00	
		$24 00

E. J. McCONOMY, IROQUOIS FALLS, ONT.

68374—Alleged loss butter	$1 94	
		$1 94

A. A. McROBERTS, NORTH BAY, ONT.

68947—Travelling expenses	$5 35	
		$5 35

T. E. McKEE, NORTH BAY, ONT.

69085—Services rendered	$22 05	
		$22 05

G. McGONIGEL, NORTH BAY, ONT.

69470—Travelling expenses	$14 15	
		$14 15

McFARLANE MANUFACTURING COMPANY, TORONTO, ONT.

69930—Ladder	$12 00	
		$12 00

S. McDOUGALL, SR., COCHRANE, ONT.

71259—Claim No. 14782, loss ship lop	$26 00	
		$26 00

A. McKNIGHT, MATHESON, ONT.

70960—Claim No. 15045, loss oats	$3 22	
		$3 22

NATIONAL LIFE ASSURANCE COMPANY, TORONTO, ONT.

63241—Rent of offices, November, 1916	$293 75	
63870— " " December, 1916	293 75	
64679— " " January, 1917	293 75	
65412— " " February, 1917	293 75	
66197— " " March, 1917	293 75	
66662— " " April, 1917	293 75	
67645— " " May, 1917	293 75	
67944— " " June, 15th, 1917	146 87	
		$2,203 12

NATIONAL COUNCIL YOUNG MEN'S CHRISTIAN ASSOC. OF CANADA, TORONTO, ONT.

63447—Donation	$25 00	
		$25 00

NEW YORK, ONTARIO & WESTERN RAILWAY COMPANY, NEW YORK, N.Y.

63513—Car repairs	$7 00	
64142— "	63 71	
64258— "	84	
65218—Car service balance	10 35	
65825—Car repairs	8 23	
66055—Car service balance	26 85	
66380— " "	24 75	
67431— " "	15 00	
67748— " "	3 75	
68745— " "	11 25	
69687—Car repairs	1 63	
69891—Car service balance	30 75	
70436— " "	13 80	
71023— " "	27 00	
71546— " "	21 00	
		$265 91

NORFOLK & WESTERN RAILWAY COMPANY, ROANOKE, VA.

63515—Car repairs	$ 36	
64491—Car service balance	9 90	
64625—Car repairs	1 66	
64252— "	11 70	
65360—Car destroyed by fire of July, 1916	658 84	
65827—Car repairs	4 44	
66053—Car service balance	62 25	
65778—Car repairs	8 23	
65974— "	11 73	
66378—Car service balance	78 75	
67355—Car repairs	8 07	
67427—Car service balance	53 00	
67744— " "	58 25	
67822—Car repairs	2 59	
68429— "	21 66	
68743—Car service balance	96 00	
68606—Car repairs	24 72	
69583— "	16 57	
69889—Car service balance	108 60	
70120—Car repairs	4 19	
70434—Car service balance	149 40	
71019— " "	115 80	
71349—Car repairs	43 96	
71674— "	13 45	
		$1,564 12

THE NORTHLAND STORES, TIMMINS, ONT.

63747—Claim No. 12888, loss corn flakes	$14 25	
66824— " 13102, loss axes	18 97	
69455— " 14983, loss beets	2 41	
71024—Expense *re* handling goods	4 60	
		$40 23

NORTHERN CANADA SUPPLY COMPANY, LIMITED, COBALT, ONT.

63751—Claim No. 12623, loss bar steel	$10 78	
64712— " 12584, loss forks	14 14	
64880— " 13371, loss wrenches	44 69	
64931— " 13199, loss cobbler's set	16 83	
65261— " 11432, express charges paid on wheels	85	
65705— " 13507, loss brushes and whisks	51 07	
66532— " 13338, overcharge car of lime	4 95	
66421— " 12959, damage to paint	34 38	
67609—Cost of changing crossing at Timmins	39 78	
67392—Claim No. 13786, damage to stove	56	
67863—Claims Nos. 13212 and 13428, damage to iron and stoves	30 40	

NORTHERN CANADA SUPPLY COMPANY, LIMITED, COBALT, ONT.—*Continued.*

68260—Claim No. 13056, damage to stove	18 26		
68404— " 14606, loss saw frames	9 75		
68426— " 13969, overcharge elevator buckets	2 02		
68932—Bags line rock	3 38		
70005—Claim No. 15580, grate broken	56		
70431— " 15579, overcharge buckets	2 03		
70791— " 14436, overcharge pitch, etc.	12 14		
71263— " 14513, loss steel	28 96		
70668— " 16050, damage to iron sheave	7 25		
70962— " 14537, loss steel	26 09		
70964— " 15677, damage to closet bowl	12 00		
71232— " 12876, loss matches	150 00		
71622—Bricks, etc.	8 75		
			$529 62

NIPISSING COCA COLA BOTTLING WORKS, LIMITED, COCHRANE, ONT.

63779—Claim No. 10816, loss bottled goods, etc.	$100 00		
64850— " 13170, loss shortage bottles of wine	6 00		
			$106 00

NORTHERN ONTARIO LIGHT & POWER CO., LTD., SOUTH PORCUPINE, ONT.

63947—Current supplied	$5 20		
63949— " "	12 88		
63951— " "	18 16		
63953— " "	53 60		
64545— " "	7 21		
64577— " "	7 28		
64663— " "	28 88		
64658— " "	60 08		
64660— " "	6 56		
64662— " "	8 89		
64664— " "	12 00		
64744—Claim No. 12391, loss car of coal	65 01		
64974—Current supplied	14 00		
64976— " "	34 80		
65040— " "	23 28		
65078— " "	30 08		
65362— " "	6 08		
65565— " "	49 76		
65567— " "	9 76		
65569— " "	6 25		
65645— " "	58 80		
65647— " "	48 64		
65903— " "	16 16		
65905— " "	34 72		
66510— " "	69 76		
66512— " "	4 72		
66514— " "	34 08		
66516— " "	3 53		
66518— " "	16 72		
66520— " "	6 72		
63379— " "	1 69		
66613— " "	5 36		
66615— " "	14 11		
66877—Claim No. 13566, damage to lamp globe	1 56		
67533—Current supplied	12 25		
67535— " "	4 97		
67543— " "	48 08		
67557— " "	8 72		
67186— " "	32 31		
67420— " "	32 29		
67422— " "	5 86		
67424— " "	2 94		
67426— " "	7 44		
67428— " "	11 20		

NORTHERN ONTARIO LIGHT & POWER CO., LTD., SOUTH PORCUPINE, ONT.—*Continued.*

67572—Current supplied	11 60
67588— " "	33 28
67821—Claim No. 12099, loss of coal	10 52
68257—Current supplied	12 72
68150— " "	76 92
68736— " "	46 70
68734— " "	44 82
68732— " "	24 29
68842— " "	1 77
68796— " "	10 16
68844— " "	48 60
68846— " "	6 64
68858— " "	6 93
68862— " "	11 41
68864— " "	15 47
69030—Thawing pipes, Haileybury station	8 00
69078—Current supplied	4 40
69080— " "	2 70
69082— " "	1 52
69519— " "	6 65
69521— " "	43 28
69523— " "	3 22
69525— " "	12 39
69527— " "	103 36
69587— " "	3 44
69977— " "	58 28
70076— " "	1 04
70078— " "	8 48
70080— " "	1 90
70234— " "	4 72
70236— " "	22 81
70238— " "	3 36
70240— " "	27 58
70310— " "	48 70
70312— " "	132 84
70314— " "	2 00
70465— " "	7 07
71181— " "	18 55
71183— " "	4 06
71185— " "	16 98
71187— " "	6 16
71189— " "	59 07
71191— " "	31 92
71387— " "	3 94
71338— " "	37 96
71340— " "	4 55
71342— " "	8 64
71396— " "	72 24
71398— " "	14 00
71400—Rebate on private siding	22 00
71624—Current supplied	44 24
	$2,156 21

NIPISSING LAUNDRY COMPANY, LIMITED, HAILEYBURY, ONT.

63955—Laundry	$1 35
63957— "	2 28
64301— "	9 50
64573— "	5 28
64972— "	4 05
65042— "	4 86
65364— "	4 35
65571— "	87
65829— "	1 29
65831— "	1 32
66630— "	4 32
66617— "	1 14

NIPISSING LAUNDRY CO., LTD., HAILEYBURY, ONT.—*Continued.*

67509—Laundry	$4 27	
67559— "	1 44	
67278— "	4 08	
68215— "	9 60	
68431— "	99	
68168— "	1 17	
68166— "	90	
68114— "	4 77	
68814— "	1 20	
69084— "	1 53	
69517— "	84	
70063— "	9 12	
69942— "	2 46	
70306— "	1 20	
70308— "	3 72	
71161— "	16 16	
71385— "	1 05	
		$105 11

NATIONAL DRUG AND CHEMICAL COMPANY, LIMITED, TORONTO, ONT.

64011—Cabinet, sponges, etc	$54 75	
64572—Chamois	5 42	
65475—Drugs and sponges	70 00	
66611—Sponges, etc.	26 78	
67211—Drugs	99 98	
67612—Chamois	8 09	
68211—Soda	15 89	
68421—Drugs	16 77	
68500—Chamois	5 63	
69026—Cyanide	16 25	
69345—Soda, etc.	19 88	
69731—Drugs	16 97	
69940—Cabinet	10 50	
70577—Drugs	94 48	
70872—Sponges, etc.	4 27	
70874— "	6 50	
		$472 16

NORTH AMERICAN BENT CHAIR COMPANY, LIMITED, OWEN SOUND, ONT.

64013—Chairs	$18 00	
65469— "	16 50	
66224—Seats	1 50	
68225—Chairs	19 20	
68425—Chairs	19 20	
		$74 40

NICHOLSON FILE COMPANY, PORT HOPE, ONT.

64217—Files	$30 91	
65471— "	31 42	
66228— "	22 34	
68221— "	34 95	
68640— "	16 95	
69932—Basts, etc.	50 83	
70783— "	30 43	
71122—Files	43 67	
71356—Basts	50 64	
		$312 14

NORTHERN ELECTRIC COMPANY, LIMITED, TORONTO, ONT.

64213—Electrical supplies	$206 61	
64574— " "	1,001 67	
65467— " "	214 44	
66226— " "	42 78	

NORTHERN ELECTRIC COMPANY, LIMITED, TORONTO, ONT.—*Continued.*

66503—Electrical Supplies	$31 15	
67099— " "	314 35	
67191— " "	10 00	
67236— " "	262 54	
67614— " "	215 90	
68289— " "	438 09	
68423— " "	190 09	
68644— " "	101 08	
69028— " "	158 74	
69347— " "	292 65	
69936— " "	123 53	
70579— " "	10 13	
70781— " "	106 00	
71120— " "	810 67	
71360— " "	24 90	
		$4,555 32

NEW ORLEANS GREAT NORTHERN RAILROAD COMPANY, BOGALUSA, LA.

64485—Car service balance	$2 25	
65210— " "	2 70	
67415— " "	6 00	
67736— " "	9 00	
68733— " "	15 75	
71015— " "	2 40	
		$38 10

NEW YORK, CHICAGO & ST. LOUIS RAILROAD, CLEVELAND, OHIO.

64487—Car service balance	$34 65	
64254—Car repairs	41	
65976— "	1 88	
66442—Ticket balance	4 10	
66935—Car repairs	6 00	
67417—Car service balance	20 25	
66844—Claim	3 43	
67000—Car repairs	3 28	
67738—Car service balance	6 00	
67985—Car repairs	7 49	
68741—Car service balance	13 10	
68486—Car repairs	7 26	
69244— " service balance	22 65	
69585— " repairs	2 24	
69855— " service balance	33 20	
70122— " repairs	2 56	
70430— " service balance	49 50	
71351— " repairs	53	
		$218 53

NEW YORK, SUSQUEHANNA & WESTERN RAILROAD COMPANY, NEW YORK, N.Y.

64489—Car service balance	$6 30	
65214— " "	41 40	
66051— " "	26 85	
66376— " "	21 75	
67425— " "	24 00	
67742— " "	2 25	
68735— " "	3 75	
69246— " "	45	
69887— " "	7 80	
70432— " "	8 40	
71017— " "	2 40	
		$145 35

NEW YORK, NEW HAVEN & HARTFORD RAILROAD COMPANY, NEW HAVEN, CONN.

64493—Car service balance	$22 95	
65216— " "	43 15	
66101— " "	60 15	
67429— " "	34 50	
67746— " "	2 25	
67870—Ticket balance	18 11	
69951— " "	84	
70053—Car service balance	27 90	
70492— " "	47 40	
71021— " "	18 00	
71073—Ticket balance	2 67	
71544—Car service balance	24 40	
71596—Ticket balance	4 75	
		$307 07

NASHVILLE, CHATTANOOGA & ST. LOUIS RAILWAY, NASHVILLE, TENN.

64495—Car service balance	$15 30	
65224— " "	13 95	
66057— " "	28 20	
65774—Car repairs	21 49	
66152—Car destroyed in fire of July, 1916	355 75	
66258—Car service balance	6 00	
67435— " "	44 25	
67752— " "	7 50	
69032—Car repairs	2 92	
69248—Car service balance	60	
69893— " "	11 25	
69738—Car repairs	4 00	
70440—Car service balance	4 80	
70806—Car repairs	21 33	
		$537 34

NEW ORLEANS, MOBILE & CHICAGO RAILROAD, MOBILE, ALA.

64497—Car service balance	$1 35	
66059— " "	1 50	
69250— " "	60	
		$3 45

THE NEW YORK CENTRAL RAILROAD COMPANY, NEW YORK, N.Y.

64499—Car service balance	$64 55	
64320—Car repairs	62 62	
65259—Claim	3 65	
65989—Ticket balance	36 85	
66149—Car service balance	114 75	
65650—Car destroyed in fire of July, 1916	902 25	
65780—Car repairs	119 33	
66040— "	95 31	
66374—Car service balance	675 17	
66440—Ticket balance	37 04	
66743—Claim	3 67	
66839—Car repairs	61 33	
67357— "	98 26	
67505—Car service balance	452 87	
67834—Car repairs	48 54	
67846—Car service balance	103 85	
68433—Claim	3 28	
68088—Car repairs	83 87	
68466—Car service balance	494 10	
69011—Car repairs	51 48	
69883—Car service balance	962 00	
69949—Interline ticket balance	9 81	
69688—Car repairs	107 19	
70342— "	56 75	

THE NEW YORK CENTRAL RAILROAD COMPANY, NEW YORK, N.Y.—*Continued.*

70490—Car service balance	452 00	
70530—Commission	58	
71013—Car service balance	368 35	
71327—Car repairs	44 85	
71440—Claim	5 82	
71542—Car service balance	227 60	
		$5,747 72

J. A. NOEL, NORTH BAY, ONTARIO.

64547—Three prints of T. & N. O. General Office Building	$1 50	
		$1 50

NORTHERN ONTARIO FIRE RELIEF COMMITTEE, TORONTO, ONT.

64575—Refund telephone tolls	$27 90	
66641— " " "	34 65	
67561—Refund freight charges	262 77	
68668— " " "	95 55	
69938—Paint	228 00	
		$648 87

NORTHERN PACIFIC RAILWAY COMPANY, ST. PAUL, MINN.

64623—Car repairs	$34 76	
64627— "	41 69	
64318— "	5 21	
65212—Car service balance	22 50	
65833—Car repairs	2 47	
65939— "	1 13	
65991—Ticket balance	23 22	
65978—Car repairs	43 42	
66933— "	2 11	
67419—Car service balance	22 50	
67487—Ticket balance	2 90	
67740—Car service balance	26 25	
67910—Car repairs	12	
68488— "	23 85	
69685— "	9 33	
70124— "	44 04	
71598—Ticket balance	10 16	
71672—Car repairs	12 29	
		$327 95

NORFOLK SOUTHERN RAILROAD COMPANY, NORFOLK, VA.

64250—Car repairs	$ 73	
65220—Car service balance	11 70	
66103— " "	14 55	
67824—Car repairs	67	
68747—Car service balance	4 50	
70438— " "	3 00	
71025— " "	16 80	
71548— " "	6 60	
		$58 55

NEW ORLEANS & NORTHEASTERN RAILROAD CO., NEW ORLEANS, LA.

64256—Car repairs	$ 25	
65222—Car service balance	15 75	
66105— " "	41 85	
66382— " "	13 50	
67433— " "	19 50	
67750— " "	6 75	
67878—Car repairs	25	
		$97 85

NEW YORK, PHILADELPHIA & NORFOLK RAILROAD, PHILADELPHIA, PA.

64316—Car repairs	$1 72	
		$1 72

NIPISSING CENTRAL RAILWAY COMPANY, TORONTO, ONT.

64666—Deduction contra from T. & N. O. voucher	$315 00	
65080—Repairs to Cobalt Reduction Co. siding	20 77	
69007—Clearance outstandings	6 00	
69764—Deduction, contra account	55 00	
70184—Insurance recovered on car barns and rolling stock	36,549 84	
71358—Brick	63 00	
		$37,009 61

THE NORTHERN LUMBER MILLS, LIMITED, NORTH COBALT, ONT.

64668—Rebate on private siding	$193 00	
65622— " "	220 01	
69375—Pine	173 95	
70042—Claim No. 14875, loss grease	4 46	
		$591 42

NEW ORLEANS, TEXAS & MEXICO RAILROAD, NEW ORLEANS, LA.

65226—Car service balance	$12 60	
65668—Car repairs	4 16	
65776— "	4 31	
66727— "	12 50	
67437—Car service balance	12 75	
67575—Car repairs	5 70	
67754—Car service balance	9 00	
68737— " "	11 25	
71027— " "	7 80	
71550— " "	7 80	
		$87 87

THE NATIONAL MALLEABLE CASTING COMPANY, CLEVELAND, OHIO.

65015—Door fasteners	$10 00	
68026— "	7 50	
69452— "	17 00	
		$34 50

ROBERT NEELEY, THORNLOE, ONT.

65159—Ties	$53 46	
		$53 46

W. B. NICOL & COMPANY, LOCK HAVEN, PA.

65393—Coal	$128 93	
66000— "	11,730 41	
66297— "	11,624 00	
66967— "	415 87	
66962— "	6,006 78	
67028— "	8,894 30	
68776— "	214 63	
69427— "	687 84	
69444— "	430 74	
		$40,133 50

NATIONAL RAILWAY PUBLICATION COMPANY, NEW YORK, N.Y.

65546—Representation in "Official Guide"	$30 00	
66381—Subscription	50	
66674— "	9 00	
68100— "	9 00	
69538—Representation in "Official Guide"	30 00	
		$78 50

NIPISSING STORES, LIMITED, COBALT, ONTARIO.

65866—Claim No. 13101, loss of shoes	$4 65	
		$4 65

J. C. NELSON, HEASLIP, ONT.

66106—Ties	$94 54	
66829— "	85 26	
		$179 80

A. O. NORTON, COATICOOK, QUEBEC.

66230—Jacks	$120 00	
67002—Repair parts for jacks	319 90	
		$439 90

NORTHERN MINES PRESS, LIMITED, COBALT, ONTARIO.

66506—Advertising	$4 90	
66377—Subscription	1 50	
67412—Advertising	26 25	
		$32 65

NORTH BAY TIMES, NORTH BAY, ONTARIO.

66508—Advertising	$4 50	
		$4 50

NEW LISKEARD SPEAKER, NEW LISKEARD, ONT.

66554—Advertising	$2 50	
67418— "	22 50	
		$25 00

G. NASMITH, NORTH BAY, ONTARIO.

66335—Travelling expenses	$ 35	
69548— " "	1 20	
70463— " "	12 85	
70894— " "	12 85	
		$27 25

NATIONAL SAFETY COUNCIL, CHICAGO, ILL.

66383—Dues for membership	$20 00	
		$20 00

NEW ONTARIO COLONIZATION COMPANY, LTD., BUFFALO, N.Y.

66451—Claim No. 14054, overcharge freight	$10 80	
		$10 80

NATIONAL FIRE-PROOFING COMPANY OF CANADA, LTD., TORONTO, ONTARIO.

66879—Claim 14184, overcharge on fire brick	$33 03	
		$33 03

NICHOLS CHEMICAL CO., LIMITED, MONTREAL, QUE.

67199—Battery acid and carboys	$116 98	
		$116 98

HAROLD NORTON, COBALT, ONTARIO.

66864—Donation *re* alleged loss of cattle	$60 00	
		$60 00

JOSEPH NELLIST, CANE P.O., ONT.

66876—Ties	$86 88	
68065— "	95 92	
68065— "	35 60	
		$218 40

NORFOLK & ROCHESTER HARDWARE COMPANY, HAILEYBURY, ONTARIO.

66998—Plyers	$3 00	
		$3 00

NEW LISKEARD WATER COMMISSION, NEW LISKEARD, ONTARIO.

67276—Water supplied	$486 05	
71377— " "	162 00	
		$648 05

C. L. NAMA, HAILEYBURY, ONTARIO.

67340—Claim 12974, loss overalls	$20 00	
		$20 00

NAZEL ENGINEERING & MACHINE WORKS, PHILADELPHIA, PA.

68217—Electric hammer	$2,683 10	
		$2,683 10

R. NIDDERY, NEW LISKEARD, ONT.

68774—Claim No. 13837, loss chain and bolts	$15 00	
		$15 00

NIPISSING MINING COMPANY, LIMITED, COBALT, ONTARIO.

69009—Claim No. 12987, damage to crucible	$12 40	
		$12 40

NEW ENGLAND PASSENGER ASSOCIATION, BOSTON, MASS.

69515—Proportion cost printing proceedings	$10 00	
		$10 00

NEWBURGH & SOUTH SHORE RAILWAY COMPANY, CLEVELAND, OHIO.

69895—Car service	$ 45	
		$ 45

NOVA SCOTIA STEEL & COAL COMPANY, LTD., NEW GLASGOW, N.S.

69934—Spikes	$2,192 40	
70581— "	2,276 40	
		$4,468 80

NIAGARA FRONTIER SUMMER RATE COMMITTEE, MONTREAL, QUEBEC.

70295—Proportion expenses	$26 68	
		$26 68

NORTHWESTERN MOTOR COMPANY, EAU CLAIRE, WIS.

71261—Claim No. 13870, engine lost in fire of July, 1916	$74 83	
		$74 83

NORTHERN BUILDERS' SUPPLY CO., NORTH BAY, ONTARIO.

71270—Tile, etc.	$115 65	
71362—Paristone	14 00	
		$129 65

NIAGARA, ST. CATHARINES & TORONTO RLY., ST. CATHARINES, ONT.

71438—Claim	$34 34	
		$34 34

THE ORIENT LINE, KANSAS CITY, MEXICO & ORIENT R. R. COMPANY, KANSAS CITY, MO.

63517—Car repairs	$1 20	
		$1 20

A. OUILLET, DANE, ONT.

63571—Travelling expenses	$13 00	
		$13 00

W. J. OLDHAM, NORTH BAY, ONT.

63623—Travelling expenses	$15 75	
64322— " "	9 35	
65139— " "	19 00	
65626— " "	12 75	
66563— " "	16 25	
66954— " "	7 75	
67777— " "	18 60	
68382— " "	19 75	
68949— " "	18 00	
69510— " "	24 05	
70325— " "	18 50	
70848— " "	27 00	
		$206 75

OFFICE SPECIALTY MFG. CO., LIMITED, NEWMARKET, ONTARIO.

64241—Office furnishings	$119 00	
64038— " "	36 50	
64578— " "	38 00	
64745— " "	45 00	
65477— " "	2 42	
65737— " "	19 00	
67061— " "	31 76	
67238— " "	9 00	
67574— " "	63 00	
67616— " "	2 97	
68219— " "	17 80	
68331— " "	46 65	
68511— " "	54 00	
68496— " "	22 00	
69716—Claim No. 13367, loss cabinet, etc.	325 00	
62944—Office furnishings	15 00	
		$847 10

JAMES OGILVY & SONS, MONTREAL, QUE.

64015—Carpet	$205 00	
64576—Flags	15 60	
65479— "	99 12	
66535— "	21 60	
67004—Burlap	16 00	
68498—Flags	20 40	
		$377 72

OFFICIAL LIST OF OPEN AND PREPAY STATIONS, ST. LOUIS, MO.

64144—Station lists	$1 59	
64827— "	3 55	
66385— "	1 56	
67577— "	98	
68032— "	1 73	
69159— "	3 35	
69768— "	1 33	
		$14 09

OREGON-WASHINGTON RAILROAD & NAVIGATION, PORTLAND, OREGON.

64260—Car repairs	$0 64	
65782— "	1 45	
66701— "	6 48	
67826— "	2 35	
71133— "	7 96	
		$18 88

OTTAWA CAR MANUFACTURING CO., LIMITED, OTTAWA, ONT.

64580—Baggage sleigh	$28 00	
69946—Baggage sleighs	190 00	
		$218 00

OFFICIAL CLASSIFICATION COMMITTEE, NEW YORK, N.Y.

64759—Classifications	$40 89	
69726— "	8 33	
70341— "	8 33	
70876— "	8 33	
		$65 88

T. O. OLSEN, KRUGERSDORF P.O., ONT.

65159—Ties	$83 52	
68730— "	134 18	
68730— "	58 99	
69642— "	24 90	
71221— "	45 00	
		$346 59

MRS. JOHN O'HARA, CANE, ONT.

65159—Ties	$54 83	
		$54 83

OREGON SHORT LINE RAILROAD COMPANY, SALT LAKE CITY, UTAH.

65941—Car repairs	$ 45	
67955— "	1 99	
68234— "	2 00	
68596—Car No. 120012, destroyed in fires, July, 1916	1,168 23	
70524—Car repairs	1 30	
70808— "	70	
		$1,174 67

ONTARIO REFORMATORY INDUSTRIES, GUELPH, ONTARIO.

66114—Brooms	$108 00	
64017— "	45 00	
64588— "	45 00	
67137— "	50 00	
68535— "	45 00	
69303— "	57 50	
70775— "	102 50	
71078— "	57 50	
		$510 50

OGILVIE FLOUR MILLS COMPANY, LIMITED, FORT WILLIAM, ONTARIO.

66423—Claim No. 14132, overcharge on car of flour	$3 00	
		$3 00

OFFICIAL ANNUAL LABOR REVIEW, TORONTO, ONTARIO.

67107—Subscription	$20 00	
		$20 00

ONTARIO SEWER PIPE COMPANY, LIMITED, MIMICO, ONTARIO.

67671—Tile	$194 64	
70724—Tee	1 19	
		$195 83

LAURA A. ORR, TORONTO, ONTARIO.

68069—Advertising	$25 00	
		$25 00

W. C. OFFER, CONNAUGHT, ONTARIO.

69596—Claim No. 15521, damage to pulley	25 83	
		$25 83

THE ONTARIO GOVERNMENT CREAMERY, NEW LISKEARD, ONTARIO.

70833—Milk supplied	$ 45	
		$ 45

POSTMASTER OF TORONTO, TORONTO, ONT.

63247—Postage on advertising matter	$50 00	
		$50 00

PILKINGTON BROTHERS, LIMITED, TORONTO, ONT.

63283—Glass	$11 45	
63305— "	178 91	
63341— "	93 42	
63922— "	46 06	
64080— "	9 44	
64326— "	43 10	
64857— "	163 90	
65195— "	206 51	
65510—Mirrors	8 41	
66581—Glass	222 00	
66870— "	589 94	
67126—Plates	61 99	
68106—Glass	260 06	
68450—Plates	19 99	
69400—Glass	126 57	
70261— "	176 20	
70878— "	25 48	
71314— "	146 55	
		$2,389 98

PATTERSON MANUFACTURING COMPANY, LIMITED, TORONTO, ONT.

63307—Felt	$75 85	
69952— "	63 42	
		$139 27

PORT HOPE FILE MANUFACTURING CO., LTD., PORT HOPE, ONTARIO.

63369—Files	$3 60	
		$3 60

PAGE-HERSEY IRON, TUBE & LEAD COMPANY, LIMITED, TORONTO, ONT.

63311—Pipe	$96 44	
63727—Claim No. 12676, pipe alleged destroyed	126 52	
63894—Pipe	131 93	
63920— "	37 16	
64942— "	114 89	
65193— "	77 46	
66787— "	98 69	
67124— "	47 11	

PAGE-HERSEY IRON, TUBE & LEAD COMPANY, LIMITED, TORONTO, ONT.—*Continued.*

67240—Pipe	$ 38	
67434— "	43 15	
68507— "	64 13	
68876— "	129 96	
68913— "	937 54	
69518— "	169 95	
70397— "	168 74	
70263— "	722 01	
70618— "	100 15	
		$3,066 21

THE PREST-O-LITE COMPANY, MERRITTON, ONT.

63337—Acetylene	$42 62	
63911—Freight charges	2 27	
63996—Acetylene	300 00	
64082—Iron	12 22	
64592—Freight charges	1 62	
64737—Welding rod	7 76	
64749—Acetylene	18 95	
64791— "	19 16	
65456— "	16 87	
65640—Freight charges	1 16	
65984— " "	2 89	
66245—Acetylene	24 34	
66265— "	17 25	
66315— "	12 04	
66387—Freight charges	2 36	
66689—Acetylene	11 77	
67141—Freight charges	56	
66710—Acetylene	17 50	
66760— "	19 06	
66940— "	18 23	
67084— "	37 07	
67370— "	17 25	
67727—Oxygen	10 28	
67921— "	34 64	
68237—Acetylene	67 18	
68004— "	16 41	
68028— "	17 58	
68052— "	23 07	
68086— "	22 08	
68196— "	23 54	
68676— " etc.	29 83	
68897— "	11 28	
69733—Freight charges	1 82	
69392—Acetylene	22 49	
69454— "	11 51	
69520— "	23 63	
70265—Welding rod	116 88	
70726—Acetylene	47 62	
		$1,082 79

C. H. POWELL, ENGLEHART, ONT.

63339—Groceries	$40 24	
63992—	27 26	
65369— "	2 20	
66473— "	34 72	
68503— "	17 71	
68140— "	18 06	
70835— "	61 89	
71046— "	13 58	
		$215 66

THE PLANET, CHATHAM, ONT.

63407—Forms		$38 64	
63994— "		8 20	
64582— "		69 75	
65489— "		132 65	
66236— "		143 60	
67067— "		17 75	
67432— "		9 70	
68291— "		90 75	
68497— "		41 60	
68934— "		219 05	
69353— "		149 95	
69649— "		15 50	
71364— "		12 75	
			$949 89

PEERLESS CARBON AND RIBBON MANUFACTURING COMPANY, LIMITED, TORONTO, ONT.

63409—Carbon		$23 85	
64586— "		60 35	
65487— "		57 50	
67087— "		23 50	
68356— "		77 50	
69651— "		1 72	
70849— "		14 00	
71366— "		2 22	
			$260 64

PERE MARQUETTE RAILROAD COMPANY, DETROIT, MICH.

63519—Car repairs		$3 56	
64503—Car service balance		22 05	
64633—Car repairs		36 85	
64374— "		9 32	
65230—Car service balance		50 40	
66063— " "		75 15	
66386— " "		32 85	
66592—Car repairs		38 52	
67055— "		10 30	
67441—Car service balance		35 10	
67066—Car repairs		70 54	
67758— "		75 60	
68155— "		57 02	
68622— "		4 80	
69254—Car service balance		188 10	
69015—Car repairs		25 04	
69740— "		41 35	
71029—Car service balance		41 25	
71137—Car repairs		108 03	
70840— "		14 55	
71554—Car service balance		10 80	
71676—Car repairs		81	
			$951 99

PITTSBURGH & LAKE ERIE RAILROAD COMPANY, PITTSBURGH, PA.

63521—Car repairs		$6 92	
64266— "		4 86	
65943— "		5 01	
65980— "		25 60	
66729— "		6 83	
68557— "		2 05	
68200— "		2 05	
71139— "		3 01	
70810— "		3 59	
			$59 92

PENNSYLVANIA RAILROAD COMPANY, PHILADELPHIA, PA.

63523—Car repairs	$16 47	
64392—Claims	8 83	
65234—Car service balance	536 85	
65334—Claims	20 96	
65366—Cars destroyed by fire of July, 1916	1,409 69	
65368—Car destroyed by fire of July, 1916	304 83	
66129—Car service balance	891 75	
66252—Car repairs	124 25	
66390—Car service balance	861 75	
66821—Car repairs	80 74	
67445—Car service balance	162 00	
67114—Car repairs	211 26	
67762—Car service balance	342 00	
67836—Car repairs	8 82	
68157— "	15 44	
68515— "	9 02	
64507—Car service balance	342 40	
64629—Car repairs	75	
64264— "	12 74	
64328— "	29 11	
64978— "	15 57	
65837— "	3 21	
66999—Claims	1 12	
68749—Car service balance	1,513 60	
68762—Car repairs	674 83	
69102— "	63 49	
69256—Car service balance	300 60	
69529—Claim	8 30	
69777—Car repairs	83 24	
69931—Car service balance	176 30	
69742—Car repairs	687 27	
70126— "	72 37	
70158—Claim	299 01	
70444—Car service balance	253 75	
71033— " "	792 70	
71353—Car repairs	62 36	
71558—Car service balance	465 80	
71678—Car repairs, etc.	331 77	
		$11,194 95

A. J. PARR, NORTH BAY, ONT.

63573—Travelling expenses	$26 20	
64066— " "	34 65	
64863— " "	32 90	
66327— " "	33 30	
66812— " "	23 05	
67779— " "	25 65	
68248— " "	37 75	
68927— " "	26 70	
69550— " "	21 55	
70395— " "	34 00	
70748— " "	27 50	
		$323 25

G. E. PALMER, NORTH BAY, ONTARIO.

63575—Travelling expenses	$42 35	
64098— " "	34 10	
64865— " "	42 50	
65757—Correspondence case	7 50	
65566—Travelling expenses	37 55	
66329— " "	32 90	
66810— " "	39 95	
67793— " "	31 60	
68122— " "	37 15	
68951— " "	39 30	
69516— " "	47 50	
70309— " "	40 00	
70682— " "	40 45	
		$472 85

THE PARKHILL MANUFACTURING COMPANY, LIMITED, MONTREAL, QUE.

63729—Claim No. 12957, alleged loss bed couch	$30 72	
		$30 72

P. PASTENE & COMPANY, MONTREAL, QUE.

63735—Claim No. 12626, loss macaroni	$10 50	
67519— " 13394, loss case whiskey	9 96	
		$20 46

P. PICARD, NORTH BAY, ONT.

63867—Travelling expenses	$7 10	
64670— " "	7 75	
65141— " "	8 75	
65742— " "	7 85	
66687— " "	11 30	
63702— " "	9 05	
68061— " "	9 75	
68512— " "	5 50	
69429— " "	15 95	
70082— " "	5 90	
70909— " "	7 00	
71000— " "	5 95	
		$101 85

THE HIRAM L. PIPER COMPANY, LIMITED, MONTREAL, QUE.

63907—Heaters	$115 86	
64594— "	288 00	
66234—Switch lamps	172 60	
67170—Signal burners	44 40	
68223—Lamp targets	12 00	
68600—Burners and switch lamps	20 55	
69038—Lamp targets	105 20	
70787—Switch tips	3 60	
		$762 21

N. L. PIPER RAILWAY SUPPLY COMPANY, LIMITED, TORONTO, ONT.

63909—Dope pails	$27 62	
64023—Chimneys, oil cans, etc.	70 60	
64596—Lamps, wicks, etc.	122 07	
65483—Lamps, feeders, etc.	436 05	
66550—Lamps, etc.	213 10	
67239— "	242 54	
67200—Signal burners	6 00	
67620— " "	18 00	
68229—Tallow pots, etc.	108 25	
68509—Oil cans, etc.	426 05	
68534— "	204 15	
69036—Mop rags	34 20	
69349—Lamps	1 70	
70837—Lanterns, etc.	59 80	
71128—Burners	8 10	
		$1,978 23

A. H. PORTER, ELK LAKE, ONT.

63999—Rent—telephone, office, Aug. 1, 1916, to Dec. 31, 1916	$50 00	
66972— " " " Jan. 1, 1917, to Apr. 30, 1917	40 00	
		$90 00

PRATT & WHITNEY COMPANY OF CANADA, LIMITED, DUNDAS, ONT.

64019—Drills	$53 80	
67729—Taps, drills, etc.	14 42	
68138—Taps	5 07	
69067— "	2 87	
69351— "	6 85	
69541—Drills	2 15	
69522—Tap	59	
70369— "	3 89	
		$89 64

THE PECK, STOW & WILCOX COMPANY, CLEVELAND, OHIO.

64021—Shears	$4 00	
		$4 00

PITTSBURGH SPRING & STEEL COMPANY, PITTSBURGH, PA.

64025—Springs	$524 35	
66232— "	336 54	
68954— "	329 45	
69087— "	1,846 28	
69954— "	62 60	
70773— "	440 66	
71130— "	285 13	
		$3,825 01

THE PANTASOTE COMPANY, NEW YORK, N.Y.

64027—Agasote boards	$93 24	
66389—Pantasote	315 39	
68505—Agasote boards	115 76	
		$524 39

PERLMUTTER & NATHANSON, PORQUIS JUNCTION, ONT.

64257—Claim No. 12358, loss wire	$1 05	
67847— " 17296, loss cornmeal	1 70	
		$2 75

PARSONS, BROWN & COMPANY, TORONTO, ONT.

64259—Claim No. 13224, loss, shortage sardines	$ 68	
		$ 68

PHILADELPHIA & READING RAILWAY COMPANY, PHILADELPHIA, PA.

64501—Car service balance	$39 60	
64262—Car repairs	22 69	
65228—Car service balance	29 70	
65370—Car destroyed by fire of July, 1916	293 20	
66061—Car service balance	117 50	
65826—Car repairs	5 28	
66384—Car service balance	108 75	
67439— " "	33 00	
67579—Car repairs	4 01	
67756—Car service balance	5 10	
68751— " "	37 80	
68624—Car repairs	24 95	
69252—Car service balance	17 55	
69459—Car repairs	11 18	
69897—Car service balance	28 80	
69690—Car repairs	1 39	
71135— "	3 64	
70812— "	22 53	
71552— "	108 00	
		$914 67

PITTSBURGH, SHAWMUT & NORTHERN RAILROAD, ST. MARY'S, PA.

64505—Car service balance	$1 35	
65232— " "	5 40	
66065— " "	67 80	
66388— " "	27 00	
67443— " "	50 25	
67760— " "	47 25	
67912—Car repairs	4 88	
69899—Car service balance	22 20	
70442— " "	3 60	
71031— " "	6 60	
71039— " "	1 80	
71556— " "	12 00	
		$250 13

PINTSCH COMPRESSING COMPANY, NEW YORK, N.Y.

64579—Gas	$125 55	
64146— "	135 42	
64980— "	168 25	
65573— "	186 66	
66537— "	138 13	
67335— "	147 80	
67576— "	141 30	
68325— "	94 95	
68674— "	119 56	
69693— "	133 24	
70055— "	119 42	
70316— "	144 46	
71368— "	130 14	
71692— "	161 92	
		$1,946 80

PITTSBURGH, CINCINNATI, CHICAGO & ST. LOUIS RAILWAY COMPANY, PHILADELPHIA, PA.

64631—Car repairs	$12 46	
64324— "	32 19	
65835— "	6 49	
68479— "	17 14	
		$68 28

PALM FECHTELER & COMPANY, NEW YORK, N.Y.

64040—Transfer ornaments	$157 50	
		$157 50

PEORIA & PEKIN UNION RAILWAY COMPANY, PEORIA, ILL.

64268—Car repairs	$ 98	
66618— "	7 85	
67828— "	55	
68547— "	1 20	
69691— "	7 09	
		$17 67

PRATT & LETCHWORTH COMPANY, LIMITED, BRANTFORD, ONT.

64584—Castings	$5 60	
65485— "	36 63	
68039—Iron	43 90	
69377—Castings	55 00	
69689— "	54 25	
70785— "	59 40	
71132— "	17 20	
		$271 98

THE PEDLAR PEOPLE, LIMITED, OSHAWA, ONT.

64590—Galv. iron	$50 25	
65481— " "	16 78	
66546— " "	97 37	
67618— " "	376 45	
68599—Claim No. 12604, loss of iron	21 11	
71126—Galv. iron	1,424 58	
		$1,986 54

F. C. PRESTON, LIMITED, HAILEYBURY, ONT.

64714—Claim No. 13121, loss cheese	$2 60	
64983— " 11675, loss two boxes Lux	5 40	
66851— " 13655, loss onions	5 50	
68363— " 13765, loss prunes	4 75	
70220—Groceries supplied, account derailment	3 45	
		$21 70

PACIFIC FRUIT EXPRESS, SAN FRANCISCO, CAL.

65388—Car service balance	$1 60	
66067— " "	21 91	
66392— " "	17 64	
67447— " "	1 93	
67764— " "	3 48	
68753— " "	1 90	
69258— " "	1 90	
69901— " "	3 73	
70446— " "	1 69	
71035— " "	7 74	
71560— " "	77	
		$64 29

POLAR REFRIGERATOR LINE, CHICAGO, ILL.

65390—Car service balance	$3 87	
		$3 87

PORCUPINE TELEPHONE-LINES, LIMITED, TIMMINS, ONT.

64907—Rental of telephone, Schumacher station	$25 00	
65548— " " Timmins "	25 00	
66489— " " " "	25 00	
68254— " " " "	25 00	
69017— " " Schumacher "	25 00	
70246— " " Timmins "	22 50	
70698— " " " "	22 50	
		$170 00

REV. A. L. PHELPS, CONWAY, ONT.

64915—Claim No. 13594, overcharge freight on canoe	$1 76	
		$1 76

PENN CANADIAN MINES, LIMITED, COBALT, ONT.

64979—Claim No. 12881, loss manganoid grind pebbles	$15 73	
65241— " 12773, overcharge rate crushes roller shells	3 70	
65868— " 13647, overcharge crushes roller shells	6 16	
67394— " 12249, overcharge crushes roller shells	5 10	
67805—Claims Nos. 14106, 14007, 14005, overcharge on silver ore.	126 06	
68623— " 14438, 13474, overcharge on silver ore	98 06	
68440—Claim No. 13895, overcharge sacks	1 98	
69013— " 13475, overcharge weight silver ore	1 94	
69718— " 12837—loss bags	7 44	
70433— " 15318, overcharge silver ore	38 11	
71267— " 15597, overcharge silver ore	64 53	
70758— " 14438, overcharge silver ore	22 94	
		$391 75

E. Peters, Earlton P.O., Ont.

65159—Ties	$30 00	
69642— "	10 00	
		$40 00

Mrs. J. Perry, Cobalt, Ont.

65239—Claim No. 13128, loss wearing apparel	$10 00	
		$10 00

Palmer & Parker Company, Boston, Mass.

65491—Mahogany	$51 70	
		$51 70

R. S. Potter, Matheson, Ont.

65709—Claim No. 13373, loss explosives	$69 75	
		$69 75

Albert Pilon, Timmins, Ont.

65739—Claim No. 13155, loss household goods	$41 81	
		$41 81

Pittsburgh & Shawmut Railroad Company, Kittaning, Pa.

66069—Car service balance	$30 30	
66394— " "	13 50	
67449— " "	13 50	
67766— " "	159 00	
68755— " "	72 75	
69260— " "	5 85	
69903— " "	36 00	
71564— " "	39 60	
		$370 50

Henry Pudden, Haileybury, Ont.

66161—Roofing new station, Matheson	$262 00	
		$262 00

The People's Hardware, Cochrane, Ont.

64981—Claim No. 12776, damage to stove	$10 43	
		$10 43

Peoria Railway Terminal Company, Chicago, Ill.

65982—Car repairs	$2 84	
		$2 84

Pease Foundry Company, Limited, Toronto, Ont.

66094—Claim No. 13240, loss tank heater	$12 00	
71134—Grates	35 75	
		$47 75

Porcupine Herald, South Porcupine, Ont.

66522—Advertising	$1 00	
67416— "	12 40	
		$13 40

Porter & Son, Elk Lake, Ont.

66544—Claim No. 13587, loss apples	$3 70	
66849— " 13586, loss apples	1 62	
68436— " 13894, loss rice	4 85	
		$10 17

CHAS. H. PASSMORE, NORTH BAY, ONT.

66548—Beef	$1 95	
		$1 95

VIOLET PATERSON, TORONTO, ONT.

66227—Services rendered	$14 00	
		$14 00

G. POLONI, COBALT, ONT.

66887—Claim No. 13342, loss wine	$9 53	
		$9 53

PUBLIC SERVICE CUP COMPANY OF CANADA, LIMITED, OTTAWA, ONT.

66951—Glass for dispensing machine	$1 00	
		$1 00

THE D. PIKE COMPANY, LIMITED, TORONTO, ONT.

66983—Awning stripe	$1 14	
69950— " "	89 61	
70587—Duck	214 20	
		$304 95

H. PETERS, COBALT, ONT.

67009—Claim No. 13149, loss oranges	$5 50	
		$5 50

PEMBROKE LUMBER COMPANY, PEMBROKE, ONT.

67517—Claim No. 14319, car demurrage	$3 00	
		$3 00

R. C. PEEVER, TOMSTOWN, ONT.

66876—Ties	$73 53	
68388— "	30 90	
		$104 43

J. PELANGIO, COCHRANE, ONT.

67260—Meals for passengers	$105 00	
		$105 00

THE PORCUPINE ADVANCE, TIMMINS, ONT.

67414—Advertising	$19 00	
		$19 00

GEORGE W. POWLES, NORTH BAY, ONT.

67739—Award W. C. B. *re* alleged injuries	$30 56	
68002— " " " "	33 11	
69650— " " " "	60 00	
		$123 67

JOHN H. PILLSWORTH, ENGLEHART, ONT.

67741—Potatoes	$72 00	
		$72 00

TAYLOR PIPE, COBALT, ONT.

67823—Claim No. 13613, loss raisins	$3 93	
67943— " 14446, loss washboard	38	
68840— " 13614, loss case biscuits	6 00	
69285— " 15398, loss pickles	75	
71269— " 14467, loss sleighs	10 20	
		$21 26

CHARLES PIERCE & SONS, LIMITED, TIMMINS, ONT.

68365—Claim, loss bag of oats	$2 58	
69283—Claims Nos. 15146 and 15157, damage to furniture, etc.	2 16	
69598—Claims, damage to pump, etc.	6 36	
70046— " " cheese, etc.	5 23	
70156— " " table, etc.	4 86	
71265—Claim No. 15147, loss chair seats	4 16	
71234— " 12860, loss underwear	18 01	
		$43 36

THE PRESTON CAR & COACH COMPANY, LTD., PRESTON, ONT.

68381—Conductors' vans	$6,840 00	
68038— " "	3,420 00	
68760— " "	10,260 00	
68963—Equalizers	328 16	
70771—Oak panel	10 95	
71124—Panel	22 69	
		$20,881 80

PORCUPINE V. N. T. GOLD MINES, LIMITED, TIMMINS, ONT.

68435—Claim No. 13740, damage to grate bar	$8 62	
		$8 62

PRESSED PRISM PLATE GLASS COMPANY, MORGANTOWN, VA.

68501—Glass	$24 00	
68638— "	20 71	
69379— "	24 00	
		$68 71

PERKINS & COMPANY, COCHRANE, ONT.

68589—Claim No. 14276, loss rice	$2 88	
69287— " 14273, loss flour	1 19	
69457— " 14277, loss patterkrisp	1 56	
69560— " 15087, loss flour	5 22	
70276— " 13926, loss building paper	85 80	
		$96 65

THOS. POTTER, McCOOL P.O., ONT.

68597—Ties	$105 13	
68597— "	144 72	
69642— "	44 70	
69642— "	45 00	
		$339 55

THE PEABODY SALES CORPORATION, LIMITED, WALKERVILLE, ONT.

68615—Claim No. 14701, loss of overalls	$55 19	
		$55 19

PACIFIC COAST PIPE COMPANY, LIMITED, VANCOUVER, B.C.

68764—Tanks	$844 00	
		$844 00

WILLIAM POLLOCK & SON, ENGLEHART, ONT.

68936—Lumber	$4 00	
		$4 00

PRESTON & SONS, LIMITED, BRANTFORD, ONT.

69034—Advertising	$2 91	
69864— "	88	
		$3 79

PREMIER GRAIN ELEVATOR MILLING COMPANY, LTD., PORTAGE LA PRAIRIE, MAN.

69318—Claim No. 14959, overcharge oats	$7 18	
		$7 18

THE PORT ARTHUR CONSTRUCTION COMPANY, DOHERTY, ONT.

69431—Contract, Doherty grade revision	$2,526 14	
70244— " " " "	13,831 56	
70585— " " " "	14,513 09	
70932— " " " "	11,159 69	
		$42,030 48

PITTSBURG & W. VIRGINIA RLY. COMPANY, PITTSBURG, PA.

69905—Car service balance	$30 00	
70448— " "	93 60	
		$123 60

PENN GAS COAL COMPANY, PHILADELPHIA, PA.

69935—Car service balance	$ 62	
70494— " "	62	
		$1 24

NATHAN PRINGLE, TROUT MILLS, ONT.

69979—Award W. C. B. *re* alleged injuries	$58 99	
		$58 99

THE PROVIDENCE GENERAL HOSPITAL, HAILEYBURY, ONT.

69380—Treatment account alleged injuries, John McPhee	$100 00	
		$100 00

A. PEART, NORTH BAY, ONT.

69514—Travelling expenses	$1 40	
		$1 40

H. W. PETRIE, LIMITED, TORONTO, ONT.

69948—Drill	$340 00	
		$340 00

PERRON, TASCHEREAU, RINFRET, VALLEE & GENEST, MONTREAL, QUE.

70044—Claim No. 15822, loss baggage	$4 00	
		$4 00

PORQUIS JUNCTION CEMETERY COMMITTEE, PORQUIS JUNCTION, ONT.

70242—Settlement, burial plot	$1 74	
		$1 74

PORT HOPE SANITARY MFG. COMPANY, LTD., TORONTO, ONT.

70399—Sink, etc.	$8 13	
		$8 13

THE PULLMAN COMPANY, CHICAGO, ILL.

70583—Damage to Pullman Makura	$8 12	
70847—Mattress, etc.	108 00	
		$116 12

PIEDMONT & NORTHERN RY. CO., CHARLOTTE, N.C.

71037—Car service balance	$4 80	
		$4 80

THE PHOTO ENGRAVERS, LIMITED, TORONTO, ONT.

70700—Engraving	$2 75	
		$2 75

PELHAM & HAVANA RAILROAD CO., CAIRO, CA.

70814—Car repairs	$4 97	
		$4 97

THE PAGE WIRE FENCE CO., LTD., WALKERVILLE, ONT.

71412—Claim No. 13584—loss of wire	$18 45	
		$18 45

PEERLESS TRANSIT LINE, CLEVELAND, OHIO.

71562—Car service balance	$ 77	
		$ 77

H. PICARD, NORTH BAY, ONT.

71406—Deduction from wages	$2 00	
		$2 00

THE QUEBEC CENTRAL RAILWAY COMPANY, SHERBROOKE, QUE.

63525—Car repairs	$1 53	
64270— "	54	
65844— "	2 58	
66398—Car service balance	75	
67453— " "	10 50	
68759— " "	3 00	
69019—Car repairs	5 40	
69907—Car service balance	6 00	
70452— " "	7 20	
71568— " "	2 40	
		$39 90

QUEBEC, MONTREAL & SOUTHERN RAILWAY CO., NEW YORK, N.Y.

64509—Car service balance	$7 20	
65236— " "	16 65	
66071— " "	14 55	
66396— " "	23 25	
67451— " "	17 25	
67768— " "	6 25	
68757— " "	18 00	
69939— " "	13 80	
70450— " "	3 15	
71041— " "	7 80	
71566— " "	17 40	
		$145 30

I. F. QUIRK, COBALT, ONT.

64746—Claim No. 12693, loss damage to cake	$3 22	
		$3 22

QUEEN'S HOTEL, TORONTO, ONT.

65628—Telephone calls, J. L. Englehart	$3 80	
		$3 80

THE QUAKER OATS COMPANY, CHICAGO, ILL.

66048—Claim No. 13720, loss by fire	$17 55	
66866— " 14300, loss oats	11 39	
		$28 94

JAMES ROBERTSON COMPANY, LIMITED, MONTREAL, QUE.

63313—Basins, etc.	$8 62	
63343—Steel plates	205 79	
63417— "	73 40	
63924—Iron	4 64	
64084—Steel plates	117 99	
64723— "	848 91	
65497— "	262 14	
65514—Steel	9 27	
67127— "	26 44	
66712—Iron boiler	58 80	
66910—Steel, etc.	77 04	
67188—Iron	19 66	
68483—Steel	195 32	
69357—Stop cocks	19 85	
69543—Steel plates	593 88	
70401—Iron	18 73	
70620—Steel	141 99	
71316— "	396 21	
		$3,078 68

THE RATCLIFF PAPER COMPANY, LIMITED, TORONTO, ONT.

63345—Twine	$41 70	
64378— "	29 90	
64748—Claims Nos. 13222-13274-13273-13272, loss paper	140 02	
64933—Claim No. 13414, loss paper	5 40	
65115—Paper	5 50	
66070—Claim No. 13828, loss paper	9 14	
66855— " 13242, loss paper	45 79	
67215—Twine	15 00	
66826—Claim No. 13931, loss paper	16 92	
67536—Twine	6 93	
68233— "	15 00	
68290— "	27 00	
70593— "	10 00	
71372— "	27 00	
71416—Claim No. 13243, loss twine	16 85	
		$412 15

J. W. RICHARDSON, NORTH BAY, ONT.

63347—Felt and nails	$56 09	
63639—Blankets	23 28	
63926—Door hangers, etc.	10 39	
63944—Putty	4 85	
65309—Hangers	7 27	
65438—Mica	1 94	
66238—Spring cot, etc.	5 93	
68104—Pails	1 94	
70267—Castings	58 59	
70841— "	1 29	
71320—Bolts	1 94	
		$173 51

ROCKWELL BARNES COMPANY, CHICAGO, ILL.

63413—Clips		$5 00	
68499—Steel fasteners		25 00	
68910—Clips		1 70	
71370— "		1 70	
			$33 40

RICHARDSON, BOND & WRIGHT, LIMITED, OWEN SOUND, ONT.

63415—Stationery supplies		$102 90	
63915— " "		20 00	
64042— " "		219 85	
64602— " "		150 25	
65495— " "		41 25	
66242— " "		212 80	
66505— " "		216 85	
67006— " "		43 90	
68231— " "		45 25	
68437— " "		82 00	
68430— " "		79 25	
68912— " "		67 95	
69387— " "		24 00	
69695— " "		48 00	
69986— " "		119 58	
70591— " "		3 25	
70853— " "		36 30	
71138— " "		181 65	
71374— " "		28 20	
			$1,723 23

RUSSIA CEMENT COMPANY, GLOUCESTER, MASS.

63625—Glue		$26 66	
64843— "		26 66	
67693— "		58 80	
			$112 12

THE RAIL JOINT COMPANY OF CANADA, LIMITED, NEW YORK, N.Y.

63671—Rail joints		$1,641 75	
63938— "		3,119 32	
66168— "		108 55	
69069— "		2,848 19	
			$7,717 81

S. H. RYAN, NORTH BAY, ONT.

63687a—Travelling expenses		$25 50	
64672— " "		26 90	
65537— " "		10 10	
			$62 50

CHAS. RECKIN & SONS, COBALT, ONT.

63781—Claim No. 12524, loss meal and grain		$7 26	
64263— " 12880, loss shortage rice		2 29	
64327— " 13270, loss sack rolled oats		60	
64919— " 13460, loss shortage corn meal		78	
66453— " 13012, damage to corn meal		20 00	
67807— " 14441, loss corn meal		37	
69289— " 14577, shortage sardines		1 45	
70048— " 14440, loss lemonade		1 49	
71271— " 14088, damage to coffee		2 83	
71236— " 16274, loss flour		5 26	
			$42 33

RICE LEWIS & SON, LTD., TORONTO, ONT.

63913—Glass cutters	$0 96	
64029—Hardware	10 45	
63411—Steel	305 29	
64598—Hinges, door buttons, etc.	39 02	
65493—Spirit levels, hand taps, etc.	48 36	
66246—Glass cutters, etc.	11 40	
67111— " "	69 96	
67213—Grindstones, etc.	53 00	
67206—Mop wringers	22 50	
68439—Pliers, etc.	3 62	
68598—Door check, gate hooks, etc.	39 42	
69104—Bricks	2 50	
68929—Steel	251 82	
69359—Bits and keys	9 24	
69737—Locks, etc.	12 13	
69958—Fixtures, etc.	72 00	
70589—Casters, etc.	32 68	
70839—Frame, etc.	1 32	
70644—Tool steel	14 54	
71140—Castings, etc.	7 50	
		$1,007 71

RAILWAY AGE GAZETTE, NEW YORK, N.Y.

63959—Subscription	$6 00	
64568— "	18 00	
66393— "	6 00	
66565— "	6 00	
67689— "	6 00	
69161— "	6 00	
		$48 00

JOSEPH RYERSON & SON, CHICAGO, ILL.

64033—Hand flue cleaners	$3 60	
66746—Welding furnace	215 00	
67923—Machinery and motor	870 62	
69040—Saw and tube, flue	1,605 00	
69988—Flue cleaner	2,025 00	
71144—Chains	1,000 00	
		$5,719 22

REVILLION FREERES TRADING CO., LIMITED, COCHRANE, ONT.

64261—Claim No. 11850, loss biscuits	$2 76	
		$2 76

RUTLAND RAILROAD COMPANY, NEW YORK, N.Y.

64363—Ticket balance	$12 34	
64511—Car service balance	7 20	
64272—Car repairs	42	
65993—Ticket balance	10 28	
66131—Car service balance	3 45	
65784—Car repairs	50	
67872—Ticket balance	14 46	
67888—Car repairs	3 54	
68761—Car service balance	41 25	
69021—Car repairs	11 97	
69933—Car service balance	3 90	
70510—Ticket balance	4 46	
70520—Car service balance	11 25	
71075—Ticket balance	10 74	
		$135 76

ROUS & MANN, LIMITED, TORONTO, ONT.

63958—Forms	$10 50	
64909—Note paper and envelopes	11 50	
65632—Folders	486 50	
69589—Alteration plate, time tables	15 00	
70714—Pass slips	14 00	
		$537 50

A. C. ROBABECK, NORTH BAY, ONT.

64600—Drugs	$1 75	
69383— "	2 75	
71136— "	1 50	
		$6 00

JAMES ROBINSON, MONTREAL, QUE.

64722—Claim No. 12857, loss shoes	$213 90	
		$213 90

CHAS. DOMINIC ROMAIN, REDWATER, ONT.

64732—Award W. C. B. *re* alleged injuries	$26 30	
65340— " " " "	35 69	
		$61 99

RICHMOND, FREDERICKSBURG & POTOMAC R. R. CO., RICHMOND, VA.

65238—Car service balance	$ 90	
66073— " "	4 35	
69909— " "	5 40	
		$10 65

LOUIS ROUSSON, COCHRANE, ONT.

65338—Award W. C. B. *re* alleged injuries	$9 35	
		$9 35

THE RAILWAY EQUIPMENT & PUBLICATION COMPANY, NEW YORK, N.Y.

64761—Representation in equipment register	$108 00	
64829—Publications	40	
65486— "	10 80	
65630—Representation in equipment register	10 00	
69531—Subscription	3 25	
		$132 45

H. L. RODGERS, NORTH BAY, ONT.

65017—Travelling expenses	$34 05	
67142— " "	209 01	
68953— " "	92 60	
70911— " "	54 24	
		$389 90

RAILWAY STOREKEEPERS' ASSOCIATION, COLLINWOOD, OHIO.

65499—Classifications	$1 20	
66391—Proceedings	6 00	
70851—Annual dues	3 00	
		$10 20

THE RAILWAY ELECTRICAL ENGINEER, NEW YORK, N.Y.

65575—Subscription	$1 00	
		$1 00

REAMSBOTTOM & EDWARDS, GIROUX LAKE, ONT.

65767—Claim No. 13763, damage to corn flakes	$ 41	
67011—Claim No. 13752, loss corn meal	1 87	
		$2 28

RICHARDS-WILCOX CANADIAN CO., LIMITED, LONDON, ONT.

65440—Door fittings	$6 70	
67140—Door hangers	5 80	
67705— "	5 80	
		$18 30

J. G. ROWE, ENGLEHART, ONT.

65474—Repairs to greenhouse	$8 80	
		$8 80

DAMASE ROY, WARREN, ONT.

65512—Hay	$121 93	
		$121 93

J. H. RAYMOND, ENGLEHART, ONT.

66060—Claim No. 13681, loss soap	$ 83	
		$ 83

REMINGTON TYPEWRITER COMPANY, LIMITED, TORONTO, ONT.

66240—Typewriter repairs	$15 55	
68235— " "	16 00	
68928— " "	50	
69381— " "	5 05	
69652— " "	1 25	
		$38 35

THE RITCHIE CUT STONE COMPANY, LIMITED, HAMILTON, ONT.

66244—Freight deducted in error	$40 50	
		$40 50

RAYMOND & WHITCOMB CO., PHILADELPHIA, PA.

66552—Commission	$ 67	
68541— "	75	
69089— "	2 64	
		$4 06

R. RANKIN, NORTH BAY, ONT.

66475—Potatoes	$10 60	
69956—Bags	70	
		$11 30

RAILWAY STEEL SPRING COMPANY, NEW YORK, N.Y.

66619—Tires	$4,074 93	
66748— "	5,926 48	
		$10,001 41

J. P. RANGER, NEW LISKEARD, ONT.

66853—Claim No. 13817, loss raisins	$2 76	
		$2 76

JAMES REED, COCHRANE, ONT.

66857—Claim No. 13060, damage to glassware	$9 28	
		$9 28

WILLIAM RENNIE CO., LIMITED, TORONTO, ONT.

67129—Seeds	$50 12	
69385— "	1 65	
		$51 77

RECEIVER GENERAL, OTTAWA, ONT.

67571—Refund of duplicate payment	$23 51	
		$23 51

JAS. RICHARDSON & SONS, LIMITED, KINGSTON, ONT.

66794—Claim No. 14255, overcharge car of oats	$33 96	
		$33 96

G. W. ROACH, McCOOL, ONT.

66876—Ties	$65 94	
		$65 94

RAILWAY SIGNAL ASSOCIATION, BETHLEHEM, PA.

66974—Publications	$1 00	
68960—Publication	1 00	
		$2 00

ROYAL POLISH COMPANY, MONTREAL, QUE.

67008—Polish	$8 10	
69355— "	16 20	
71142— "	12 15	
		$36 45

MIKE ROTA, NORTH BAY, ONT.

67492—Award, W. C. B., *re* alleged injuries	$8 86	
		$8 86

B. REID, NORTH BAY, ONT.

67534—Teaming	$3 00	
		$3 00

THOS. ROSS, NORTH BAY, ONT.

67592—Travelling expenses	$18 75	
		$18 75

RAILWAY AND LOCOMOTIVE ENGINEERING, NEW YORK, N.Y.

68513—Subscription	$2 00	
		$2 00

ALBERT ROBINSON, CANE P.O., ONT.

68597—Ties	$44 40	
68946— "	18 60	
		$63 00

SYDNEY ROWLANDSON, HEASLIP, ONT.

68597—Ties	$44 40	
68946— "	18 40	
		$62 80

MISS R. RICHES, TORONTO, ONT.

68048—Services rendered	$11 67	
		$11 67

I. Rice, Iroquois Falls, Ont.

68262—Claim No. 14101, loss roll paper	$1 60	
69163— " 14301, loss bag sugar	7 88	
69461— " 12145, damage to sausage	2 16	
		$11 64

M. J. Roche, Cochrane, Ont.

68220—Repairing clock, Iroquois Falls Station	$2 50	
		$2 50

Rome Iron Mills, Incorporated, New York, N.Y.

69735—Iron	$74 70	
		$74 70

L. D. Roberge, Kirkland Lake, Ont.

70007—Claim No. 15583, loss dry goods	$12 71	
71414— " 14488, loss potatoes	3 17	
		$15 88

B. Rushton, Kenabeek P.O., Ont.

69642—Ties	$185 87	
		$185 87

The Rural Publishing Company, Limited, Peterborough, Ont.

70222—Advertising	$10 00	
		$10 00

Rypan-Porcupine Mines, Ltd., South Porcupine, Ont.

70278—Claim No. 15466, loss eggs	$1 14	
		$1 14

Ben Rothschild, Cochrane, Ont.

70435—Refund freight charges, account fire sufferers	$117 07	
		$117 07

Frank Roberts, Matheson, Ont.

70750—Donation *re* cow killed	$25 00	
		$25 00

Thomas Steele, North Bay, Ont.

63251—Award, W. C. B., *re* alleged injuries	$26 85	
		$26 85

Sheet Metal Products Company of Canada, Limited, Toronto, Ont.

63315—Pails	$23 55
63351— "	33 94
63932—Oil cans, etc.	18 33
64086—Cups, pails, etc.	65 64
64948—Cups, measures, etc.	10 10
64847—Lanterns	9 10
65019—Oil cans	10 67
65197—Shovels, etc.	38 75
65517—Iron	5 80
65442—Lanterns	9 03
65808—Tin can screw	1 30
66295—Pearl cups	11 11
66797—Pails, etc.	128 26
66716—Oil cans, etc.	117 06

SHEET METAL PRODUCTS COMPANY OF CANADA, LIMITED, TORONTO, ONT.—*Continued*

66922—Oil cans, etc.	$37 29	
67218—Car plate	22 50	
67540— "	75 00	
67927—Oil cans	41 24	
68247—Tin	26 70	
68134—Wire	72 46	
69404—Oil cans	13 82	
70373—Pans, etc.	8 54	
		$780 19

THE STEEL COMPANY OF CANADA, LIMITED, MONTREAL, QUE., AND HAMILTON, ONT.

63317—Bolts, nuts and screws	$331 56	
63355—Washers and nuts	13 61	
63359—Wood screws	66 67	
63421—Screws	2 73	
63629—Machine bolts, track bolts, etc.	1,053 19	
64053—Iron, etc.	184 23	
64055—Steel, etc.	130 97	
63930—Bolts, etc.	248 77	
63934—Washers	26 71	
63946—Tacks	3 07	
64330—Washers	22 11	
64606—Nuts and washers, etc.	106 77	
64678—Steel, etc.	599 43	
64946—Bolts, etc.	133 49	
64725— "	87 13	
65201—Washers	16 38	
65203—Bolts	441 23	
65507—Iron	67 52	
65515—Rivets, iron, etc.	51 93	
65518—Washers	10 58	
65520—Bolts, washers, etc.	468 96	
65988—Iron, steel, etc.	1,914 58	
66170— " "	113 95	
66221—Bolts	46 16	
66247—Nuts, etc.	195 17	
66293—Bolts, etc.	186 33	
66789—Rivets and nuts	83 63	
67337—Iron and steel	551 67	
67339—Nuts, steel, etc.	343 38	
66720—Rivets, and nuts, etc.	126 64	
66868—Washers and nuts	18 11	
67128—Bolts	41 03	
67242—Iron	22 14	
67308—Iron and steel	275 73	
67372—Rivets and nuts	146 66	
67578—Track bolts and nuts	1,371 56	
67624—Iron and steel	85 39	
67929—Nuts	156 31	
68263—Iron	15 17	
68449— "	58 11	
68475—Screws, rivets, etc.	395 92	
68485—Washers	27 09	
68144— "	30 52	
68142—Nuts and rivets	108 88	
68446—Rivets	35 79	
68594—Iron	247 63	
68582—Bars, rand rivets	404 01	
68874—Nuts, rivets, etc.	190 27	
69042—Steel	52 83	
68903—Nuts, washers	211 91	
68905—Screws, bolts, etc.	2,941 08	
69467—Iron, etc.	210 10	
69469— "	167 88	
69545—Bolts	12 64	
69779—Steel	54 80	

THE STEEL COMPANY OF CANADA, LIMITED, MONTREAL, QUE., AND HAMILTON, ONT.—*Continued.*

69402—Machine bolts	11 81	
69524—Rivets, etc.	115 15	
69964—Iron, etc.	61 53	
69990— "	342 35	
70269—Bolts	766 90	
70371—Washers	31 59	
70407—Bolts	331 47	
70859—Iron	63 89	
70867—Iron, etc.	217 14	
70622—Bolts, etc.	177 14	
70906— "	177 92	
71158—Iron	145 24	
71318—Washers	193 21	
71378—Steel	5 34	
		$17,550 79

SCYTHES & COMPANY, LIMITED, TORONTO, ONT.

63349—Duck	$82 32	
63423— "	94 03	
63627— "	202 71	
65513—Waste	145 89	
65802—Duck	107 96	
66176—Waste	136 08	
66583—Duck	208 50	
67097—Waste	800 43	
67622— "	2,177 79	
68126—Duck	277 00	
68636—Wipers	43 47	
68880—Duck	227 66	
69391—Wool packing	535 50	
70403—Duck	113 95	
70855—Wipers	37 09	
		$5.190 38

J. H. STILL MANUFACTURING COMPANY, LIMITED, ST. THOMAS, ONT.

63353—Pick handles	$17 23	
63896—File handles	2 28	
64845—Hammers	22 44	
65199—Tools	84 69	
65501—Flag staffs	2 70	
66718—Handles	53 61	
67500— "	4 50	
67707— "	161 87	
67925—Adze handles	20 68	
68451—Flag staffs	6 75	
		$376 75

THE JAMES SMART MANUFACTURING COMPANY, LIMITED, BROCKVILLE, ONT.

63357—Tee, hinges	$11 98	
64944—Hammers	12 83	
65516— "	11 64	
66777—Pumps	70 17	
66714—Strap hinges	8 25	
		$114 87

THE STEEL EQUIPMENT COMPANY, LIMITED, PEMBROKE, ONT.

63419—Files, etc.	$49 50	
63998—Transfer cases	12 00	
67149—Files	12 00	
67214— "	12 00	
		$85 50

SEABOARD AIR LINE RAILWAY COMPANY, PORTSMOUTH, VA.

63527—Car repairs	$7 92	
64515—Car service balance	8 55	
64274—Car repairs	2 43	
65242—Car service balance	8 10	
66075— " "	10 20	
65986—Car repairs	3 12	
66703— "	2 33	
67068— "	22 39	
67914— "	2 90	
69262—Car service balance	16 35	
69023—Car repairs	8 00	
69911—Car service balance	6 30	
70456— " "	6 00	
71043— " "	12 00	
		$116 59

ST. LOUIS & SAN FRANCISCO RAILROAD COMPANY, ST. LOUIS, MO.

63529—Car repairs	$4 18	
64513—Car service balance	13 35	
64637—Car repairs	1 73	
64276— "	10 15	
65240—Car service balance	11 25	
65839—Car repairs	2 48	
66133—Car service balance	5 40	
66400— " "	18 75	
67770— " "	9 00	
67916—Car repairs	74	
67987— "	5 44	
68763—Car service balance	13 65	
68578—Car repairs	2 61	
69699— "	70	
70651— "	13 91	
71359— "	5 88	
71684— "	12 11	
		$131 33

ST. JOHNSBURG & LAKE CHAMPLAIN RAILROAD COMPANY, BOSTON, MASS.

63531—Car repairs	$2 05	
		$2 05

ST. LOUIS, SAN FRANCISCO & TEXAS RAILWAY, FORT WORTH, TEXAS.

63533—Car repairs	$2 54	
		$2 54

SOUTHERN PACIFIC COMPANY, PACIFIC SYSTEM, SAN FRANCISCO, CAL.

63535—Car repairs	$1 05	
64517—Car service balance	18 00	
64639—Car repairs	18 12	
65244—Car service balance	10 80	
65372—Car destroyed by fire of July, 1916	782 20	
65995—Ticket balance	54 38	
65670—Car repairs	18 03	
66841— "	30 73	
67057— "	19 10	
67038— "	1 18	
67772—Car service balance	2 25	
68549—Car repairs	2 65	
68765—Car service balance	8 25	
68807—Ticket balance	82 86	
68314—Car repairs	13 83	
69142—Ticket balance	11 92	

SOUTHERN PACIFIC COMPANY, PACIFIC SYSTEM, SAN FRANCISCO, CAL.—*Continued.*

69697—Car repairs	5 50	
70512—Ticket balance	3 26	
71355—Car repairs	19 51	
71570—Car service balance	42 00	
		$1,145 62

JAMES SINTON, NORTH BAY, ONT.

63577—Travelling expenses	$14 35	
64114— " "	5 15	
		$19 50

STEEL & RADIATION, LIMITED, TORONTO, ONT.

63579—Bolts and nuts	$3 27	
67869—Claim No. 13621, damage to boiler section	9 53	
68976— " 14030, damage, radiator section	1 70	
70627— " 13595, damage, shutters	5 55	
		$20 05

SOUTHERN CLASSIFICATION COMMITTEE, ATLANTA, GA.

63673—Proportion expenses	$1 89	
66643— " "	2 52	
64763—Classifications	45	
69167—Proportion expense	75	
		$5 61

R. SWAN, NORTH BAY, ONT.

63689—Travelling expenses	$39 65	
64674— " "	35 40	
65473— " "	40 45	
65902— " "	39 40	
66691— " "	34 15	
67032— " "	35 40	
68369— " "	29 45	
68378— " "	44 10	
69229— " "	71 00	
69806— " "	37 25	
70815— " "	37 60	
71014— " "	39 25	
		$483 10

MRS. A. SAUVE, TEMAGAMI, ONT.

63783—Claim No. 12645, loss apples	$5 00	
		$5 00

N. J. SULLIVAN, ELK LAKE, ONT.

63861—Travelling expenses	$9 00	
64704— " "	12 00	
65143— " "	15 50	
65744— " "	2 50	
66693— " "	6 50	
67304— " "	8 00	
68063— " "	43 85	
68510— " "	24 50	
69433— " "	6 80	
70084— " "	22 45	
70913— " "	20 50	
71002— " "	27 75	
		$199 35

THE STEVENSON BOILER & ENGINE WORKS, PETROLIA, ONT.

63917—Fire extinguisher	$40 00	
66985— " "	60 00	
67210— " "	188 00	
67626— " "	60 00	
69110— " "	490 00	
71148— " "	132 00	
		$970 00

J. STONE & CO., LTD., DEPTFORD, LONDON, S.E.

64035—Electrical equipment	$13 37	
63928— " "	1,313 22	
64612— " "	365 00	
65503— " "	218 98	
66556— " "	26 02	
66621— " "	295 82	
67436— " "	209 13	
69114— " "	40 00	
69743— " "	5 70	
69902— " "	265 85	
71150— " "	3 77	
		$2,756 86

THE SAFETY CAR HEATING AND LIGHTING CO., MONTREAL, QUE.

64037—Mantles, etc.	$58 56	
64604—Gaskets	60 45	
65509—Gas mantles and bowls	247 60	
66178—Fuses, etc.	7 13	
67113—Gas fittings, etc.	473 58	
68295—Mantles, etc.	123 30	
68494—Battery connectors	15 84	
69106—Lamps	9 75	
70869—Lamps, etc.	394 96	
		$1,391 17

SMITH'S FALLS MALLEABLE CASTINGS CO., LTD., SMITH'S FALLS, ONT.

64039—Castings	$19 22	
64614— "	9 42	
65505— "	12 27	
67208— "	49 75	
68259— "	3 24	
68453— "	2 52	
68580— "	63 30	
69962— "	4 60	
70857— "	18 40	
71156— "	10 30	
		$193 02

STANDARD PLANING MILLS, LTD., NORTH BAY, ONT.

64051—Storm sash, etc.	$22 27	
63936—Lumber	1,214 40	
64044— "	326 00	
64610— "	38 59	
65315—Lumber, doors and lath	987 74	
66180—Lumber, etc.	25 26	
66395— " "	378 73	
67115—Doors	27 25	
67216—Lumber	41 55	
67841— "	217 25	
68458— "	1,515 95	
68916— "	22 00	
69112—Doors	43 00	

STANDARD PLANING MILLS, LTD., NORTH BAY, ONT.—*Continued.*

69091—Pine	71 92	
69741—Lumber	62 04	
69994— "	888 03	
70845— "	991 35	
70752—Repairs to saw	2 00	
71380—Door	3 00	
		$6,878 33

T. SALIDAS & CO. (IMPERIAL CANDY STORE), NORTH BAY, ONT.

64283—Claim No. 12489, loss oranges and lemons	$9 25	
		$9 25

STRONG DRUG COMPANY, LTD., HAILEYBURY, ONT.

64329—Claim No. 12449, loss account chewing gum	$ 37	
64925— " 13059, loss, gum	40	
71238— " 12875, loss, lime juice	4 28	
		$5 05

SAN ANTONIO AND ARANSAS PASS RAILWAY CO., SAN ANTONIO, TEXAS.

64519—Car service balance	$6 75	
65248— " "	2 25	
67361—Car repairs	14 25	
69264—Car service balance	60	
70458— " "	1 80	
71045— " "	2 40	
		$28 05

SANTA FE REFRIGERATOR DESPATCH COMPANY, TOPEKA, KAN.

64521—Car service balance	$1 90	
65250— " "	4 66	
65945— " "	1 75	
67459— " "	13 04	
67740— " "	7 62	
68767— " "	1 94	
69268— " "	86	
69915— " "	4 90	
70460— " "	10 97	
		$47 64

SWIFT REFRIGERATOR LINE, CHICAGO, ILL.

64523—Car service balance	$3 62	
65252— " "	29 06	
66077— " "	18 76	
66406— " "	26 19	
67461— " "	15 26	
67776— " "	5 56	
		$98 45

ST. LOUIS, TROY & EASTERN RAILROAD CO., ST. LOUIS, MO.

64635—Car repairs	$2 39	
		$2 39

WM. SWAIN, NORTH BAY, ONT.

63960—Award, W. C. B., *re* alleged injuries	$14 44	
64382— " " " "	10 83	
		$25 27

SOUTHAM PRESS, LIMITED, TORONTO, ONT.

64000—Forms	$19 50	
64148— "	32 00	
64046— "	3 72	
64008— "	3 10	
64616—Passes	36 00	
64676— "	15 00	
64912—Forms	63 00	
64939—Time tables	6 75	
65311—Cards	35 00	
65519—Forms	316 41	
65528—Time tables	79 00	
65828— "	15 50	
66174—Tickets	108 15	
66596—Time tables	63 00	
66397—Cards	1 24	
66399—Time tables, etc.	181 50	
66623—Copies circular	16 75	
67063—Passes	6 00	
67101—Tickets	58 99	
67018— "	12 28	
67070—Folders, etc.	36 25	
67538—Coupons	10 96	
67717—Printing tariffs	26 80	
67719— " "	183 75	
68241—Printing time tables	18 75	
68293—Printing tariffs	79 00	
68058— " "	29 25	
68420—Passes	7 00	
68584—Pocket folders, time tables, etc.	77 73	
68914—Checks, cards	40 87	
69108—Time tables	77 25	
69165—Printing tariffs	26 15	
69393—Checks, cards	41 48	
69395—Printing tariffs	11 35	
69739—Labels and tickets	250 25	
69464—Printing tariffs	296 00	
69996— " "	21 50	
69998— " "	142 50	
70248—Time table	4 00	
70809—Cards, etc.	69 11	
71195—Time tables	187 50	
71196—Cards, etc.	18 67	
71376—Pads	15 00	
		$2,744 01

T. W. SQUIRE, TORONTO, ONT.

64100—Groceries	$27 48	
65181— "	26 60	
66477— "	25 77	
67043— "	27 64	
67020— "	26 21	
67843— "	16 57	
		$150 27

W. L. SMITH, TORONTO, ONT.

64158—Editing	$25 00	
		$25 00

SOUTHERN RAILWAY COMPANY, WASHINGTON, D.C.

64278—Car repairs	$5 04
66135—Car service balance	19 40
65830—Car repairs	24 02
66402—Car service balance	6 30
66594—Car repairs	28 15

SOUTHERN RAILWAY COMPANY, WASHINGTON, D.C.—*Continued.*

67455—Car service balance	17 70	
67491—Ticket balance	19 52	
68447—Car repairs	43	
68573— "	44 62	
70346— "	111 21	
70454—Car service balance	3 60	
71682—Car repairs	130 42	
		$410 41

T. M. STEPHENSON, TORONTO, ONT.

64332—Canadian Almanac, 1917	$1 00	
		$1 00

ENOS SCOFIE, NORTH BAY, ONT.

64380—Award, W. C. B., *re* alleged injuries	$12 00	
		$12 00

THE SPECTATOR PRINTING CO., LIMITED, HAMILTON, ONT.

64452—Advertising	$20 00	
65086— "	2 16	
67611— "	2 94	
67542— "	2 40	
68315— "	2 40	
68958— "	2 28	
70057— "	2 16	
70811— "	4 32	
		$38 66

J. W. SEWELL, NORTH BAY, ONT.

64788—Laundry	$6 00	
		$6 00

SOUTH PORCUPINE FIRE BRIGADE, SOUTH PORCUPINE, ONT.

64950—Services	$35 00	
		$35 00

ALFRED SMITH, HEASLIP, ONT.

65044—Award W. C. B. *re* alleged injuries	$13 20	
		$13 20

D. STEWART, NEW LISKEARD, ONT.

65050—Claim No. 13335, hogs and meat	$244 00	
		$244 00

THE STRATFORD DAILY BEACON, STRATFORD, ONT.

65082—Advertising	$1 05	
65084— "	1 05	
66479— "	1 43	
		$3 53

ST. JOSEPH & GRAND ISLAND RAILROAD COMPANY, ST. JOSEPH, MO.

65246—Car service balance	$ 90	
66137— " "	19 05	
66404— " "	17 25	
67457— " "	1 50	
		$38 70

SHURLY-DIETRICH COMPANY, LIMITED, GALT, ONT.

64699—Saws, etc.	$37 93	
64793—Band saws	5 75	
64859—Saws	20 58	
66585— "	44 10	
67931— "	57 77	
68452— "	6 86	
		$172 99

SULLIVAN & SHILLINGTON, COBALT, ONT.

64921—Claim No. 13119, loss bag of oats	$2 34	
67342— " 14443, loss pickles	80	
67867— " 13973, loss oats	9 30	
69293—Damage to groceries	8 33	
71273—Claim No. 16052, damage to cider and grape juice	2 63	
		$23 40

SWIFT CANADIAN COMPANY LIMITED, TORONTO, ONT.

64923—Claim No. 12420, loss two cases lard	$28 40	
65872— " 12225, damage to beef	4 31	
67013— " 14134, value of meat used at Cochrane	53 12	
66830— " 13612, loss lard	11 85	
67791— " 13953, shortage of meat	16 38	
67871— " 13932, value of meat	18 55	
68443— " 13288, loss ham	4 32	
68601— " 13540, loss eggs	23 70	
69295— " 13954, loss beef	22 91	
70009—Claims Nos. 15584, 13021, loss beef, etc.	131 60	
70162—Claim No. 14032, non-delivery beef	9 00	
70280— " 13896, shortage beef	11 37	
70439— " 16053, loss meat	5 00	
70625— " 12511, damage to meat	19 76	
70915— " 12922, damage to meat	9 28	
70974— " 14985, loss pork	37 00	
71242— " 13539, loss soap, etc.	99 19	
		$505 74

STANDARD PAINT COMPANY OF CANADA, LIMITED, MONTREAL, QUE.

64937—Claim No. 13154, loss roofing paper	$44 54	
		$44 54

I. A. SOLOMON, HAILEYBURY, ONT.

65243—Claim No. 13430, loss tobacco	$3 57	
		$3 57

SWEDISH STEEL & IMPORTING COMPANY, LIMITED, MONTREAL, QUE.

65511—Steel	$38 08	
67628— "	9 60	
		$47 68

SOUTHERN RAILWAY COMPANY IN MISSISSIPPI, MOBILE, ALA.

65832—Car repairs	$1 02	
		$1 02

A. STEELE, CHARLTON, ONT.

65870—Claim No. 13284, loss of butter	$14 00	
		$14 00

W. J. STOTHERS, PORQUIS JUNCTION, ONT.

66062—Claim No. 13324, loss evaporated milk	$4 69	
		$4 69

SENECA COAL MINING COMPANY, BUFFALO, N.Y.

66172—Coal	$548 05	
66755— "	5,915 62	
67360— "	594 04	
		$7,057 71

THE SCLATER ASBESTOS COMPANY, LIMITED, MONTREAL, QUE.

66182—Metallic gaskets	$1 88	
		$1 88

WILLIAM SILVERTHORN, NORTH BAY, ONT.

66275—Award W. C. B. *re* alleged injuries	$4 98	
		$4 98

S. SALZER, HOYLE P.O., ONT.

66571—Donation *re* horse alleged injured	$50 00	
		$50 00

THE SENTINEL PUBLISHING COMPANY, LIMITED, TORONTO, ONT.

66695—Advertising	$15 00	
		$15 00

SPOKANE, PORTLAND & SEATTLE RAILWAY COMPANY, PORTLAND, ORE.

66843—Car repairs	$ 36	
70344— "	45	
71272—Car service balance	50	
		$1 31

WILLIAM SCULLY, MONTREAL, QUE.

66987—Uniform caps	$157 50	
68918— " "	2 25	
71154— " "	100 00	
		$259 75

SHEA, SMITH & COMPANY, CHICAGO, ILL.

66989—Tariff punch	$9 50	
68243—Paper fasteners	26 63	
68445—Memo. pads	2 51	
69389—Stationery supplies	4 02	
		$42 66

JOHN SPENCE, NEWARK, N J.

67025—Claim No. 11588, loss baggage	$108 00	
		$108 00

ST. LOUIS SOUTHWESTERN RAILWAY COMPANY, ST. LOUIS, MO.

67359—Car repairs	$6 60	
67918— "	4 43	
68570— "	39	
69266—Car service balance	9 75	
69913— " "	15 00	
71141—Car repairs	73	
71357— "	4 30	
71680— "	3 05	
		$44 25

SAN FRANCISCO & PORTLAND STEAMSHIP COMPANY, PORTLAND, ORE.

67489—Ticket balance	$3 20	
		$3 20

THE STRATFORD DAILY HERALD, STRATFORD, ONT.

67613—Advertising	$1 33	
68265— "	1 30	
68680— "	1 15	
		$3 78

A. A. STREATFIELD, TORONTO, ONT.

66876—Ties	$32 34	
		$32 34

H. E. SMALLPIECE, TORONTO, ONT.

67010—Advertising	$15 00	
		$15 00

STANDARD CHEMICAL IRON & LUMBER COMPANY, TORONTO, ONT.

67212—Shellac spirits	$58 93	
		$58 93

SHERWIN-WILLIAMS COMPANY OF CANADA, LIMITED, MONTREAL, QUE.

67306—Paint	$1 47	
68005— "	20 58	
68041— "	36 75	
		$58 80

SWIFT REFRIGERATOR TRANSPORTATION COMPANY, CHICAGO, ILL.

67890—Car repairs	$3 23	
		$3 23

A. M. SMITH, CHARLTON, ONT.

67651—Loading poles	$6 60	
		$6 60

MRS. R. SAVARD, COBALT, ONT.

67825—Claim No. 14517, damage to chairs	$ 75	
68424— " 14516, damage to mattress	3 00	
		$3 75

L. SOPER, ENGLEHART, ONT.

67865—Claim No. 14091, damage to furniture	$3 50	
		$3 50

L. ST. ARNAUD, NORTH BAY, ONT.

68009—Travelling expenses	$10 85	
70896— " "	6 15	
		$17 00

W. SWITZER, LATCHFORD, ONT.

68015—Travelling expenses	$11 35	
68588— " "	7 50	
69231— " "	7 70	
69552— " "	12 30	
70467— " "	11 85	
70942— " "	5 15	
		$55 85

SUPERINTENDENT OF DOCUMENTS, WASHINGTON, D.C.

68043—Bulletins	$ 20	$ 20

J. STEELE, CANE P.O., ONT.

68065—Ties	$42 68	$42 68

WILLIAM SHERMAN, LEEVILLE, ONT.

68065—Ties	$331 20	$331 20

THE STOWELL COMPANY, SOUTH MILWAUKEE, WIS.

68245—Door hangers	$18 00	
71146— " "	30 00	
		$48 00

THE STANLEY HOUSE, MATHESON, ONT.

68261—Board and lodging engineering party	$72 00	$72 00

MISS O. SIRR, NEW LISKEARD, ONT.

68367—Claim No. 14622, damage to cherries	$1 75	$1 75

THE SUNBEAM SPECIALTY COMPANY, LIMITED, TORONTO, ONT.

68481—Lanterns	$15 34	$15 34

EDWARD SOWRY, CANE P.O., ONT.

68595—Ties	$18 01	$18 01

J. J. SAYA, NORTH BAY, ONT.

68603—Claim No. 14915, overcharge demurrage	$1 00	$1 00

SAN PEDRO, LOS ANGELES & SALT LAKE R. R. CO., LOS ANGELES, CAL.

68769—Car service balance	$1 50	
70508— " "	4 06	
		$5 56

ARTHUR STEVENS, ENGLEHART, ONT.

68102—Meals supplied account delayed train	$221 50	
69463—Claim No. 14445, loss cheese	12 04	
		$233 54

THE SOCIETY OF RAILWAY FINANCIAL OFFICERS, PHILADELPHIA, PA.

68256—Annual dues	$10 00	$10 00

A. J. B. SAUMIER, SWASTIKA, ONT.

68400—Claim No. 14033, loss coal	$2 70	$2 70

THE SEMI-WEEKLY POST, THOROLD, ONT.

68586—Advertising ..... $2 72 — $2 72

E. SCOTT, HEASLIP, ONT.

68388—Ties $34 10
69642— " ..... 9 30 — $43 40

SMITH & HEMENWAY COMPANY, INCORPORATED, NEW YORK, N.Y.

68948—Pliers ..... $8 40 — $8 40

STANDARD PRINTING & PUBLISHING COMPANY, KINGSTON, ONT.

69086—Advertising ..... $30 00 — $30 00

SAUGAMO ELECTRIC COMPANY OF CAN., LTD., MONTREAL, QUE.

68931—Lighting equipment ..... $67 62 — $67 62

SALISBURY & ALBERT RLY. COMPANY, HILLSBORO, N.B.

69025—Car repairs ..... $1 40 — $1 40

C. STEPHENS COMPANY, LTD., COLLINGWOOD, ONT.

69291—Claim No. 13911, overcharge storage ..... $2 70 — $2 70

P. H. SECORD & SONS, LIMITED, BRANTFORD, ONT.

69465—Claim No. 13491, damage to tile ..... $20 00 — $20 00

SPROUL & SOUCIE, NEW LISKEARD, ONT.

69535—Claim No. 14161, shortage case, etc. ..... $3 50 — $3 50

SHANKMAN BROTHERS, TIMMINS, ONT.

70011—Claim No. 14611, loss shredded wheat ..... $3 72 — $3 72

STAYMAN & KORMAN, ENGLEHART P.O., ONT.

69642—Ties ..... $11 67 — $11 67

MRS. JOHN SAVELA, SUDBURY, ONT.

69872—Claim No. 13508, loss furniture ..... $125 00 — $125 00

SHELL BAR BOICO SUPPLY, LIMITED, TORONTO, ONT.

69960—Boico ..... $68 64 — $68 64

SINGER SEWING MACHINE COMPANY, TORONTO, ONT.

69992—Machine, etc. ..... $98 15 — $98 15

SAMSON CORDAGE WORKS, BOSTON, MASS.

70000—Signal cord $112 62 $112 62

H. R. SWITZER, LATCHFORD, ONT.

70002—Award W. C. B. *re* alleged injury $20 28 $20 28

MRS. J. W. SIMMS, COBALT, ONT.

70160—Claim No. 15275, damage to carriage $7 00 $7 00

STEPHENSON & SON, NEW LISKEARD, ONT.

70250—Advertising $4 60 $4 60

A. SEGUIN, NUSHKA, ONT.

70233—Refund unexpired telephone rental $12 30 $12 30

THE W. C. STAHLE COMPANY, PITTSBURGH, PA.

70289—Wage tables $18 28 $18 28

THE SUDBURY CONSTRUCTION & MACHINERY CO., LTD., SUDBURY, ONT.

70437—Claim No. 15750, damage to man-cage $81 04 $81 04

SANDERS & PETCHERSKY, TIMMINS, ONT.

70623—Claim No. 12863, loss eggs $18 30 $18 30

J. A. SIMMERS, LIMITED, TORONTO, ONT.

70843—Tobacco Stems $1 25 $1 25

SANDY VALLEY & ELKHORN RY., BALTIMORE, MD.

71047—Car service balance $5 40 $5 40

SPOKANE, PORTLAND & SEATTLE RY. CO., PORTLAND, ORE.

71049—Car service balance ..... $ 80 $ 80

SPANISH RIVER PULP & PAPER MILLS, LTD., SAULT STE. MARIE, ONT.

71275—Claim No. 15935, loss liniment $5 94 $5 94

STERLING RUBBER COMPANY, LIMITED, GUELPH, ONT.

70728—Gloves $21 17 $21 17

H. SMALL, NORTH BAY, ONT.

70778—Travelling expenses $6 80 $6 80

STANDARD OIL COMPANY, CHICAGO, ILL.

70816—Car repairs	$2 72	
		$2 72

SIMMS CARTAGE COMPANY, COBALT, ONT.

71026—Handling shipment of goods	$2 00	
71240— " " "	2 00	
		$4 00

STERLING SALT COMPANY, NEW YORK, N.Y.

71152—Salt	$132 66	
		$132 66

D. E. THOMSON, TORONTO, ONT.

63245—Fee as counsel, November, 1916	$400 00	
63872— " " December, 1916	400 00	
64681— " " January, 1917	400 00	
65418— " " February, 1917	400 00	
66195— " " March, 1917	400 00	
66664— " " April, 1917	400 00	
67647— " " May, 1917	400 00	
67946— " " June, 1917	400 00	
68839— " " July, 1917	400 00	
69366— " " August, 1917	400 00	
70099— " " September, 1917	400 00	
70574— " " October, 1917	400 00	
		$4,800 00

MRS. NELLIE TAYLOR, COCHRANE, ONT.

63259—Award W. C. B. *re* alleged injuries to F. Taylor (deceased)	$30 00	
63874— " " " " " " ..	30 00	
64669— " " " " " " ..	30 00	
65414— " " " " " " ..	30 00	
66191— " " " " " " ..	30 00	
66666— " " " " " " ..	30 00	
67649— " " " " " " ..	30 00	
67948— " " " " " " ..	30 00	
68841— " " " " " " ..	30 00	
69364— " " " " " " ..	30 00	
70201— " " " " " " ..	30 00	
70576— " " " " " " ..	30 00	
		$360 00

TEMISKAMING & NORTHERN ONTARIO RAILWAY COMM., TORONTO, ONT.

63361—Potatoes	$3 80
63921— "	26 60
64289—Claim No. 13008, clearance outstanding	6 66
64305— " 9976, " "	60
64331— " 12390, " "	1 00
64333— " 12390, " "	35
64549—Claims Nos. 11399 and 12889, clearance outstanding	2 82
64048—Potatoes	3 80
64396—Claims Nos. 11205 and 11184, clearance outstanding	5 75
64454—Claim No. 12162, clearance outstanding	10 97
64726— " 13390, " "	5 40
64882— " 13374, " "	1 48
64992—Claims Nos. 7989 and 8033, clearance outstanding	161 61
65052—Claim No. 13335, clearance outstanding	1 80
64917— " 13594, " "	43
64987— " 14407, " "	3 11
65049—Claims Nos. 13302 and 12892, clearance outstanding	13 49
65057— " 12759, 13290 and 13369, clearance outstanding	5 33
65065—Claim No. 13291, clearance outstanding	1 50

TEMISKAMING & NORTHERN ONTARIO RAILWAY COMM., TORONTO, ONT.—*Continued*

65247—Claims Nos. 13107 and 13095, clearance outstanding	25
65579—Water rates, Cobalt station, o/s	18 00
65669—Claim No. 13509, clearance outstanding	1 09
65675— " 11507, " "	3 34
65763— " 11619, " "	3 79
65771—Claims Nos. 13709 and 11257, clearance outstanding	5 04
65678—Claim No. 12969, clearance outstanding	2 05
65692— " 13408, " "	29
65718—Claims Nos. 11692 and 13333, clearance outstanding	2 42
65724—Claim No. 12603, clearance outstanding	90
66046—Claims Nos. 13691, 13720 and 13723, clearance outstanding	7 61
66058—Claim No. 13051, clearance outstanding	13 01
66100— " 13245, " "	17 92
66162—Claims Nos. 13842 and 13827, clearance outstanding	1 64
66534—Claim No. 13922, clearance outstanding	10 13
66542— " 13370, " "	4 16
66657— " 14036, " "	2 36
66745— " 14118, " "	40
67261— " 14324, " "	3 15
67521— " 14318, " "	3 28
66786— " 12005, " "	3 74
66796— " 13313, " "	107 62
66828— " 13931, " "	1 43
66832— " 12554, " "	4 78
66842— " 11618, " "	2 44
67312— " 14376, " "	74
67344— " 14259, " "	4 52
67350— " 12913, " "	1 00
67356— " 12578, " "	4 15
67396— " 6883, " "	92
67476—Iron and steel	142 07
68047—Claim No. 11397, clearance outstanding	5 52
68271—Scrap and white lead	50 25
68627—Claims, clearance outstanding	6 13
63711—Claim No. 12583, clearance outstanding	8 04
63731— " 12957, " "	2 16
63733— " 12626, " "	1 50
63737— " 12619, " "	1 45
63741— " 13006, " "	1 15
63745— " 12888, " "	95
63749— " 12623, " "	1 67
63753— " 12851, " "	3 46
63757— " 13112, " "	1 00
63961— " 13193, " "	1 38
63963— " 12954, " "	2 40
63967—Telegraph account	35
64229—Membership fees Board of Trade, agent Cobalt	5 00
64247—Claim No. 13004, clearance outstanding	05
64253— " 12855, " "	1 55
64273— " 12321, " "	81
64277— " 12316, " "	1 24
64281— " 12489, " "	37
64285— " 12401, " "	6 12
64394— " 12605, " "	1 14
64398— " 13201, " "	4 45
64400—Claims Nos. 13048 and 13223, clearance outstanding	4 53
64456—Clearance outstanding	6 90
64688—Claim No. 13007, clearance outstanding	3 18
64716— " 12920, " "	1 63
64720— " 12857, " "	2 01
64724— " 12636, " "	2 65
64754— " 11671, " "	3 96
64760— " 13054, " "	80
64756— " 13341, " "	5 06
64778—Claim, clearance outstanding	14 22
64780— " " "	148 79
64826—Claim No. 13196, clearance outstanding	2 60

TEMISKAMING & NORTHERN ONTARIO RAILWAY COMM., TORONTO, ONT.—*Continued.*

64838—Claim, clearance outstanding	5 28
64854— " " "	13 72
64878—Claim No. 13371, clearance outstanding	1 29
64886— " 13058, " "	21
64888— " 13241, " "	6 11
65054— " 12774, " "	1 70
64935—Claims Nos. 13414, 13199 and 13154, clearance outstanding	10 78
64985—Claim No. 13639, clearance outstanding	77
65029—Claims Nos. 13195, 12858 and 12633, clearance outstanding	7 80
65033—Claim No. 12571, clearance outstanding	96
65037— " 12811, " "	70
65041— " 13607, " "	5 13
65053—Claims Nos. 13470, 13591 and 13616, clearance outstanding	4 11
65215—Claim No. 11282, clearance outstanding	69
65227— " 13363, " "	72
65229— " 13322, " "	84
65231— " 13640, " "	3 00
65249— " 13107, " "	1 69
65263— " 11462, " "	2 19
65655— " 13087, " "	1 11
65665— " 13768, " "	53 51
65673—Claims, clearance outstanding	2 56
65677— " " "	12 00
65679—Claim No. 12604, clearance outstanding	1 38
65703— " 13434, " "	2 38
65707— " 13507, " "	1 39
65741— " 12509, " "	8 38
65769—Claims, clearance outstanding	4 21
65233—Claim No. 13583, clearance outstanding	3 00
65696— " 12891, " "	8 55
65700— " 13202, " "	1 32
65702—Claims, clearance outstanding	16 15
65706—Claim No. 13628, clearance outstanding	40
65720— " 13333, " "	2 34
65874— " 13935, " "	18 30
65876—Claims Nos. 13217 and 13942, clearance outstanding	1 28
66066—Claims, clearance outstanding	3 75
66096—Claim No. 13240, clearance outstanding	1 07
66098— " 13564, " "	1 33
66156— " 12953, " "	11 21
67523—Claims	187 14
67582—Refund telephone rentals	18 25
67648—Claims, clearance outstanding	179 93
67965— " " "	60 27
68607— " " "	100 24
68090—Deduction contra account	18 00
68396—Outstanding	23 98
68828— "	63 30
68826— "	698 89
68978— "	42 33
65544—Deduction to cover o/s accounts collectible	337 94
69101—Claims, clearance outstanding	9 07
69233— " " "	14 10
69473—Fencing, etc.	50 71
69745—Roofing scrap, etc.	150 73
69781—Claims, clearance outstanding	170 62
69720—Claim No. 13310, overcharge coal, etc.	18 14
69870— " 13508, clearance outstanding	7 00
70030—Claims, overcharge on cores, etc.	1 97
70166—Claim No. 12606, clearance outstanding	1 87
70286—Claims, clearance outstanding	275 14
70635—Claims, overcharge dump carts, etc.	18 42
71361—Claims, clearance outstanding	165 57
70760— " " "	1 37
70908— " " "	15 73
71442— " " "	23 90
71444— " " "	67 73
	$3,880 86

TORONTO SANITARY TOWEL, COAT & APRON SUPPLY COMPANY, TORONTO, ONT.

63371	Towel supply	$4 80	
64334	" "	4 80	
64877	" "	4 80	
65634	" "	4 80	
66822	" "	9 60	
67781	" "	4 80	
68244	" "	4 80	
69955	" "	4 40	
69460	" "	3 50	
70327	" "	3 50	
70756	" "	3 50	
			$53 30

TIME TABLE DISTRIBUTING COMPANY OF CANADA, LTD., ST. JOHN, N.B.

63489	Distributing time-tables	$15 00	
64154	" "	15 00	
64797	" "	15 00	
65530	" "	15 00	
66507	" "	15 00	
66778	" "	15 00	
67755	" "	15 00	
68228	" "	15 00	
69105	" "	15 00	
69462	" "	15 00	
70297	" "	15 00	
70654	" "	15 00	
			$180 00

TRANS-CONTINENTAL FREIGHT BUREAU, CHICAGO, ILL.

63491	Tariffs	$2 16	
64150	"	4 17	
64879	"	2 17	
66403	"	8 02	
67034	"	1 52	
67580	"	4 20	
68652	"	1 20	
69103	"	1 00	
70059	"	1 01	
70532	"	1 43	
71390	"	2 34	
			$29 22

TOLEDO, ST. LOUIS & WESTERN RAILROAD COMPANY, TOLEDO, OHIO.

63537	Car repairs	$4 31	
64282	"	2 96	
64982	"	2 99	
65254	Car service balance	1 35	
66081	" "	5 25	
67045	Car repairs	2 23	
67959	"	2 70	
68773	"	24 75	
69591	"	1 95	
69917	Car service balance	2 40	
69744	Car repairs	2 23	
			$53 12

THORPE BROTHERS, NEW LISKEARD, ONT.

63581	Funeral expenses *re* E. Osborne	$20 00	
63785	Claim No. 12990, damage to chair	1 20	
64764	" 13233, loss damage to mattress	1 50	
64739	Award W. C. B. burial expenses *re* sectionman Astel	75 00	
66064	Claim No. 13483, damage to doll sleighs	2 25	
67849	" 13913, loss chair backs	1 88	
70015	Claims Nos. 13912 and 15545, damage to chairs	2 20	
70441	Claim No. 15872, damage to furniture	50	
			$104 53

TEMISKAMING & NORTHERN ONTARIO RAILWAYMEN'S PATRIOTIC ASSOC., NORTH BAY, ONT.

63593—Deductions from payrolls	$21 00	
64364— " " "	21 00	
65075— " " "	23 00	
65642— " " "	13 00	
66557— " " "	13 00	
66960— " " "	13 00	
67903— " " "	13 00	
68302— " " "	13 00	
69037— " " "	13 00	
69750— " " "	13 00	
70359— " " "	13 00	
70920— " " "	13 00	
		$182 00

E. A. TILLEY, NORTH BAY, ONT.

63607—Travelling expenses	$2 00	
64220— " "	3 50	
		$5 50

THE TORONTO WORLD, TORONTO, ONT.

63691—Subscription	$3 00	
66991—Advertising	35 00	
		$38 00

TORONTO SALT WORKS, TORONTO, ONT.

63919—Salt	$176 84	
		$176 84

TUDHOPE LUMBER COMPANY, ELK LAKE, ONT.

63923—Wood	$3 00	
70706—Refund telephone rental	16 67	
		$19 67

TIFTON TERMINAL COMPANY, TIFTON, GA.

63969—Car service balance	$1 35	
		$1 35

G. TANCREDI, NORTH BAY, ONT.

64001—Expenses	$21 00	
		$21 00

THE THREADING MACHINE CO., SANDUSKY, OHIO.

64057—Tools	$3 75	
		$3 75

TORONTO DISINFECTANT CO., TORONTO, ONT.

64059—Carbolacene	$38 28	
64570—Carbolacene and blockettes	56 28	
65313—Carbolacene	39 15	
66192— "	38 28	
67374— "	74 28	
68532— "	76 56	
		$322 83

TALLMAN BRASS & METAL CO., HAMILTON, ONT.

64061—Copper	$81 38	
65525—Copper, etc.	65 49	
67171—Copper	1 50	
67244—Copper tubing, etc.	250 27	
68273—Copper and brass	95 45	
		$494 09

TEMPLETON KENLY CO., LTD., TORONTO, ONT.

64063—Lever poles	$205 00	
65373—Jack parts	38 40	
		$243 40

GEO. TAYLOR HARDWARE LIMITED, NEW LISKEARD, ONT.

64265—Claim No. 12925, damage to lamp chimneys in transit	$1 81	
64762— " 13054, loss iron	2 01	
64766— " 12927, loss shortage elbows	1 27	
64768— " 11917, loss graphite crucible	27 22	
65245— " 12506, loss rails	82 91	
65711—Claims Nos. 12835 and 13746, loss of hardware	14 58	
66106—Ties	37 60	
66536—Claim No. 11256, overcharge on drills	8 64	
66889— " 12980, overcharge on machinery	58	
67027— " 13013, loss wagon	9 31	
66798— " 13975, damage to mufflers	1 57	
67346— " 13985, overcharge on tools	2 68	
67873—Claims Nos. 10566-13898-13990, loss of hardware	18 38	
68455—Claim No. 13378, loss box of glass	32 01	
68619— " 11254, overcharge on machinery	1 21	
68790—Claim No. 15009, damage to churn	1 03	
69093—Claims Nos. 14912 and 89, damage to pans and grease	9 03	
69095—Claim No. 14616, loss fire bricks	3 85	
69401—Door set	1 40	
69537—Claims Nos. 13986 and 14014, o/c machinery, loss netting	5 68	
70013—Claim No. 14934, overcharge weight screens	23 03	
69604— " 15080, damage to castings	1 55	
69606— " 15496, shortage snaths	4 06	
70004—Latch	2 50	
70164—Claims, overcharge lead, etc.	9 98	
70282—Claim No. 14855, loss iron	9 71	
70631— " 14896, loss hardware, etc.	68 44	
70633— " 15316, overcharge Litharge ex. Carnegie, Pa.	3 68	
70879—Lamps	4 30	
70881—Glass, etc.	3 20	
71277—Claim No. 15267, overcharge Litharge	2 45	
71279— " 15082, damage to lamp shades	2 00	
70970—Claims Nos. 13976 and 15805, loss hardware	20 89	
71244—Claim No. 15079, damage to tile	14 18	
71246— " 14768, loss hides	32 13	
		$464 87

TREASURER OF ONTARIO, TORONTO, ONT.

64293—Balance due on account fire ranging, December 31st, 1915	$10,000 00	
69981—Inspection station boiler at Cochrane	71 30	
70650—Proceeds from operation	250.000 00	
		$260.071 30

TRAVELERS' INSURANCE COMPANY, HARTFORD, CONN.

64365—Ticket balance	$ 55	
65997— " "	97	
66444— " "	1 52	
67493— " "	4 54	
67874— " "	1 10	
68571— " "	2 34	

TRAVELERS' INSURANCE COMPANY, HARTFORD, CONN.—*Continued.*

69144—Ticket balance	$ 42	
69953— " "	1 24	
70514— " "	96	
71077— " "	3 03	
71600— " "	2 89	
		$19 56

TORONTO, HAMILTON & BUFFALO RAILWAY, DETROIT, MICH.

64367—Ticket balance	$4 59	
64641—Car repairs	2 27	
64338— "	3 08	
64752—Claim No. 11419, loss apples	17 25	
64984—Car repairs	23	
64927—Proportion overcharge weight silver ore	207 39	
65999—Ticket balance	6 60	
66446— " "	2 20	
67495— " "	3 30	
69146— " "	2 20	
69097—Car repairs	1 23	
69694— "	90	
71079—Ticket balance	92	
71458— " "	16 20	
71686—Car repairs	46	
		$268 82

TRANSIT COMPANY, LIMITED, TORONTO, ONT.

64525—Car service balance	$1 90	
65258— " "	5 05	
66085— " "	3 87	
66412— " "	1 54	
68777— " "	1 60	
69272— " "	9 19	
70496— " "	1 54	
71572— " "	1 57	
		$26 26

TEMISKAMING TELEPHONE COMPANY, LIMITED, NEW LISKEARD, ONT.

64581—Telephone rental	$10 00	
64222—Telephone service	50	
64701—Telephone rental	28 50	
64795— " "	50 00	
66653— " "	17 50	
66766— " "	22 50	
66768— " "	15 00	
67663— " "	28 50	
68848— " "	35 00	
68855— " "	28 50	
69099— " "	15 00	
70223— " "	17 50	
70604— " "	22 50	
70704— " "	15 00	
		$306 00

TEXAS & NEW ORLEANS RAILROAD COMPANY, HOUSTON, TEX.

64643—Car repairs	$20 85	
67932— "	10 63	
68553— "	6 59	
69653— "	71 28	
70188— "	28 09	
70842— "	3 13	
		$140 57

TEMISKAMING & NORTHERN ONTARIO RAILWAY TELEGRAPH, NORTH BAY, ONT.

64152—Telegraph service	$0 47	
65046— " "	58	
65841— " "	1 09	
66558— " "	1 00	
		$3 14

TEXAS & PACIFIC RAILWAY COMPANY, DALLAS, TEXAS.

64280—Car repairs	$4 28	
64986— "	17 59	
66083—Car service balance	35 25	
65992—Car repairs	2 02	
66410—Car service balance	6 95	
66731—Car repairs	6 59	
67048— "	5 34	
67780—Car service balance	7 25	
68775— " "	37 50	
68232—Car repairs	4 19	
69919—Car service balance	9 60	
70464— " "	90	
71051— " "	10 20	
71576— " "	5 40	
		$153 06

JOHN W. THOMPSON, LEEVILLE P.O., ONT.

64286—Ties	$67 48	
		$67 48

TUDHOPE LUMBER COMPANY, ELK LAKE P.O., ONT.

64286—Ties	$179 18	
64286— "	358 36	
68597— "	105 40	
69642— "	210 80	
		$853 74

THE TURNER COMPANY, TORONTO, ONT.

64770—Claim No. 12615, loss wine	$47 00	
		$47 00

TOUGH-OAKES GOLD MINES, LIMITED, KIRKLAND LAKE, ONT.

64852—Claim No. 13204, shortage meats	$16 46	
70443— " 13742, damage to crucible	55 00	
		$71 46

TOLEDO, PEORIA & WESTERN RAILWAY COMPANY, PEORIA, ILL.

65256—Car service balance	$3 15	
66079— " "	3 00	
66408— " "	11 25	
67463— " "	15 75	
67778— " "	3 00	
68771— " "	13 50	
69270— " "	12 30	
70462— " "	1 20	
71574— " "	3 60	
		$66 75

TEMAGAMI STEAMBOAT-HOTEL COMPANY, LIMITED, TEMAGAMI, ONT.

63425—Bread	$ 40	
		$ 40

THE THOMAS PINK COMPANY, LIMITED, PEMBROKE, ONT.

64721—Peaveys	$14 65	
66785— "	17 26	
67709— "	18 61	
		$50 52

TORONTO PATRIOTIC FUND, TORONTO, ONT.

64735—Donation	$5,000 00	
66175—Deductions from payrolls	40 20	
		$5,040 20

TORONTO DISTRICT LABOUR COUNCIL, TORONTO, ONT.

64801—Advertising	$15 00	
69406— "	15 00	
		$30 00

ANTOINE TREMBLAY, NORTH BAY, ONT.

65145—Award W. C. B. *re* alleged injuries	$16 38	
		$16 38

GEORGE TRAVER, HEASLIP P.O., ONT.

65159—Ties	$8 35	
		$8 35

TOUGH-OAKES GOLD MINES, LIMITED, KIRKLAND LAKE, ONT.

65265—Claim No. 13205, loss flour	$6 96	
66188—Coal	49 35	
		$56 31

J. J. TURNER & SONS, PETERBOROUGH, ONT.

65521—Tents	28 39	
66186—Tarpaulin	40 00	
71162—Flags	97 68	
		$16,607 00

J. H. A. TAYLOR, NORTH BAY, ONT.

65523—Bread	$8 22	
70875— "	1 98	
		$10 20

JOHN TAYLOR & COMPANY, LIMITED, TORONTO, ONT.

65527—Soap	$37 00	
66184— "	53 05	
67193— "	50 00	
67012— "	17 00	
68457— "	74 50	
70877— "	34 50	
		$266 05

THE TEMISKAMING MINING COMPANY, LIMITED, COBALT, ONT.

65529—Soft coal	$23 62	
		$23 62

WILLIAM THOMAS, NORTH BAY, ONT.

65613—Award W. C. B. *re* alleged injuries	$67 46	
65594— " " " "	34 32	
66567— " " " "	66 19	
		$167 97

TEMISKAMING TRADING COMPANY, LIMITED, HAILEYBURY, ONT.

65777—Claim No. 13534, damage to oats	$7 00		
66834— " 14103, loss damage to flour	8 32		
70017— " 13764, overcharge freight car potatoes	2 45		
70670— " 15930, damage to flour	6 20		
			$23 97

THE TOLEDO & OHIO CENTRAL RAILWAY COMPANY, CLEVELAND, ONT.

65947—Car repairs	$ 24		
65834— "	46		
65994— "	4 43		
			$5 13

TRANS-MISSISSIPPI TERMINAL RAILROAD COMPANY, NEW ORLEANS, LA.

65949—Car repairs	$4 00		
			$4 00

TOMSTOWN LUMBER COMPANY, TOMSTOWN, ONT.

65159—Ties	$35 73		
68597— "	800 00		
69642— "	10 54		
69642— "	46 42		
69642— "	433 18		
			$1,325 87

THE THOMAS COMPANY, NORTH BAY, ONT.

65550—Repairing clock	$3 50		
68124— " clocks	4 25		
69399—Clock, etc.	18 75		
70318—Repairing clock	4 50		
70275— " "	4 00		
71197— " "	2 50		
71389— " "	6 00		
			$43 50

TERMINAL RAILROAD ASSOCIATION OF ST. LOUIS, ST. LOUIS, MO.

65836—Car repairs	$3 81		
66705— "	1 00		
67892— "	77 56		
69696— "	1 06		
71143— "	9 06		
70818— "	21 13		
			$113 62

TENNESSEE CENTRAL RAILROAD COMPANY, NASHVILLE, TENN.

65990—Car repairs	$7 03		
			$7 03

W. E. THOMPSON, LEEVILLE P.O., ONT.

66106—Ties	$369 83		
			$369 83

TIMES PRINTING COMPANY, HAMILTON, ONT.

66190—Forms	$14 00		
66645— "	31 50		
			$45 50

CHARLES H. TOTTY, MADISON, NEW JERSEY.

66401—Chrysanthemums	$17 00		
			$17 00

TORONTO WEEKLY RAILWAY & STEAMBOAT GUIDE, TORONTO, ONT.

66491—Subscription	$2 60	
70299— "	3 00	
		$5 60

THE TOLEDO TERMINAL RAILROAD COMPANY, TOLEDO, OHIO.

66733—Car repairs	$ 20	
69692— "	6 83	
		$7 03

TAYLOR INSTRUMENT COMPANIES, ROCHESTER, N.Y.

67093—Window thermometers	$5 51	
		$5 51

WM. L. TRACY, NORTH BAY, ONT.

67537—Award, W. C. B., *re* alleged injuries	$59 24	
		$59 24

F. TEEPLES, LEEVILLE, ONT.

66876—Ties	$161 35	
68597— "	114 86	
68388— "	67 30	
68388— "	47 60	
		$391 11

TELEGRAPH & TELEPHONE AGE, NEW YORK, N.Y.

66980—Subscriptions	$2 00	
		$2 00

TEXARKANA & FORT SMITH RAILWAY CO., TEXARKANA, TEXAS.

67046—Car repairs	$3 52	
		$3 52

TRAFFIC SERVICE BUREAU, CHICAGO, ILL.

67280—Forms	$. 40	
68859—Subscription	10 00	
		$10 40

TAYLOR & ARNOLD, LIMITED, MONTREAL, QUE.

67630—Knuckles, etc.	$262 10	
68269— "	30 00	
69397— "	17 00	
70861— "	195 60	
		$504 70

J. TRAVO, COCHRANE, ONT.

67745—Award, W. C. B., *re* alleged injuries	$22 83	
68276— " " " "	2 54	
		$25 37

T. W. THAYER COMPANY, CAZENOVIA, N.Y.

67827—Claim No. 10390, overcharge on lumber	$14 07	
		$14 07

J. & J. TAYLOR, LIMITED, TORONTO, ONT.

68267—Repairs to safe	$19 35	
68920—Combination key	85	
70702—Steel cabinets	195 00	
		$215 20

TAYLOR-FORBES COMPANY, LIMITED, GUELPH, ONT.

68577—Claim No. 13928, overcharge on boiler castings	$48 17	
		$48 17

TEMISCOUATA RAILWAY, RIVIERE DU LOUP, QUE.

68779—Car service balance	$2 25	
69276— " "	1 95	
		$4 20

THORPE & STEVENSON, NEW LISKEARD, ONT.

68956—Team hire	$38 50	
		$38 50

TRANSPORTATION UTILITIES COMPANY, NEW YORK, N.Y.

69116—Sheathing	$45 96	
		$45 96

TREMONT AND GULF RAILWAY COMPANY, WINNFIELD, LA.

69274—Car service balance	$1 20	
69921— " "	4 80	
71578— " "	7 20	
		$13 20

G. S. TATHAM, NEW LISKEARD, ONT.

69320—Claim No. 15120, loss milk	$ 85	
69297— " 14669, loss drugs	1 26	
69602— " 15167, damage to can and loss oil	1 05	
70672— " 16042, damage to bottles	66	
70968— " 16041, loss drugs	1 44	
		$5 26

THE TEMISKAMING NAVIGATION CO., HAILEYBURY, ONT.

69600—Claim No. 12766, loss paint	$2 12	
		$2 12

H. TREMBLY, PORCUPINE, ONT.

69608—Claim No. 14363, loss meat	$20 26	
		$20 26

JAMES TURNER & COMPANY, LIMITED, HAMILTON, ONT.

70050—Claim No. 14788, loss ice cream	$25 48	
		$25 48

O. J. THORPE, NEW LISKEARD, ONT.

70284—Claim No. 15870, damage to furniture	$1 00	
70966— " 15959, " "	1 00	
		$2 00

TERRY & GORDON, TORONTO, ONT.

70863—Timber	$267 14	
71221—Ties	66 00	
		$333 14

TORONTO CARPET MANUFACTURING CO., LTD., TORONTO, ONT.

70871—Carpet, etc.	$315 75	
		$315 75

THE TORONTO POTTERY COMPANY, LIMITED, TORONTO, ONT.

70873—Brick	$195 00	
		$195 00

W. E. TURNER, MATHESON, ONT.

71281—Claim No. 15563, loss flour	$7 50	
		$7 50

THE THIEL DETECTIVE SERVICE CO. OF CANADA, LTD., MONTREAL, QUE.

71379—Services	$77 30	
		$77 30

THE TECHNICAL PRESS, LIMITED, VANCOUVER, B.C.

70652—Advertising	$15 00	
		$15 00

THE TUCKETT'S TOBACCO CO., LTD., HAMILTON, ONT.

71160—Tobacco stems	$10 37	
		$10 37

TEXAS, MEXICAN RAILWAY CO., LAREDO, TEXAS.

71688—Car repairs	$ 62	
		$ 62

THE CORPORATION OF THE TOWN OF TIMMINS, TIMMINS, ONT.

65060—Water supplied	$210 60	
67591— "	239 10	
69120— "	180 90	
69561— "	67 80	
		$698 40

UNITED TYPEWRITER COMPANY, LIMITED, TORONTO, ONT.

63427—Typewriter, etc.	$127 42
63925—Repairs, etc.	12 44
64002—Cleaning typewriters, etc.	18 50
64050—Rental of typewriter	4 60
64618—Ribbons	46 75
64790—Rental of typewriter	5 00
64733—Typing agreement	5 65
64803—Repairs to desk	25 00
64831—Screws	20
65577—Typewriter, ribbons, etc.	334 14
65759—Repairs	85
66194—Typewriter, etc.	124 80
66598—Balance on typewriter supplied to R. C. Hann	40 00
66509—Stationery, etc.	75 00
66655—Typewriter	118 92
67117—Ribbons, etc.	29 87
66726—Inspection and ribbons	21 00
67022—Inspection, etc.	17 64
68277—Paper fasteners, etc.	214 10
68555—Typewriter, etc.	311 23
68282—Inspections and ribbons	24 00
68354—Roller moistener	70
68850—Repairs to typewriter	12 25
68922—Typewriters, etc.	173 13
69122—Rental of typewriter	2 50
69169—Repairs to typewriter	60
69701— " "	143 80
70006—Envelope sealer	86

UNITED TYPEWRITER COMPANY, LIMITED, TORONTO, ONT.—*Continued.*

70597—Repairs to typewriter	24 00	
70595—Pencil sharpener	1 89	
70883—Ribbons, etc.	38 85	
71382— "	30 05	
		$1,985 74

UNION MEAT MARKET, SCHUMACHER, ONT.

64267—Claim No. 10817, loss hogs	$24 05	
		$24 05

UNION PACIFIC RAILROAD COMPANY, OMAHA, NEB.

64369—Ticket balance	$2 35	
64529—Car service balance	25 30	
64645—Car repairs	53 52	
64340— "	10 59	
65262—Car service balance	35 10	
65374—Car destroyed by fire of July, 1916	846 66	
65951—Car repairs	24	
66087—Car service balance	47 25	
66993—Car repairs	3 83	
67465—Car service balance	18 75	
67782— " "	23 25	
68545—Car repairs	15 08	
69280—Car service balance	46 50	
69923— " "	31 20	
69578—Claim	5 66	
70820—Car repairs	4 66	
		$1,169 94

UNION RAILROAD COMPANY, PITTSBURG, PA.

64527—Car service balance	$18 90	
65260— " "	35 55	
65838—Car repairs	5 40	
66414—Car service balance	4 50	
66735—Car repairs	58	
68684—Car service balance	5 40	
69278— " "	4 95	
69282— " "	1 20	
69475—Car repairs	45	
71053—Car service balance	38 40	
71145—Car repairs	11 89	
		$127 22

UNION TANK LINE, NEW YORK, N.Y.

64531—Car service balance	$8 07	
65264— " "	10 40	
66089— " "	1 60	
67784— " "	1 90	
68781— " "	1 90	
69107— " "	1 60	
70466— " "	8 23	
71055— " "	2 93	
71580— " "	5 69	
		$42 32

DAVID UFLAND, ELK LAKE, ONT.

64952—Clearing land adjoining Elk Lake Station	$24 48	
68040— " " "	39 25	
68042— " " "	12 50	
		$76 23

UNION LUMBER COMPANY, LTD., TORONTO, ONT.

66425—Claim No. 12285, overcharge weight of lumber	$6 63	
66722—Lumber	797 03	
66924— "	868 78	
		$1,672 44

UNDERHILL COAL COMPANY, BUFFALO, N.Y.

66965—Coal	$2,293 74	
66856— "	13,006 92	
66880— "	12,314 86	
67228— "	9,096 12	
67502— "	9,303 07	
67845— "	6,382 66	
68738— "	4,061 12	
69593— "	1,940 36	
71198— "	401 41	
		$58,800 26

UNITED STATES STEEL PRODUCTS CO., NEW YORK, N.Y.

67673—Steel channels	$17 16	
68530—Plates	308 75	
70473—Wheels	1,440 00	
		$1,765 91

UNIVERSAL IRON & SUPPLY COMPANY, ST. LOUIS, MO.

67783—Chalk	$14 25	
		$14 25

UNION REFRIGERATOR TRANSIT COMPANY, MILWAUKEE, WIS.

69925—Car service balance	$5 69	
70468— " "	1 90	
71057— " "	5 41	
		$13 00

WM. G. VERNER, ENGLEHART, ONT.

63609—Travelling expenses	$3 15	
		$3 15

VIRGINIA & SOUTHWESTERN RAILWAY CO., BRISTOL, VA., AND TENN.

64533—Car service balance	9 00	
64647—Car repairs	53	
		$9 53

VOKES HARDWARE COMPANY, LIMITED, TORONTO, ONT.

64088—Brass fittings	$94 00	
65021—Store door sets	26 10	
66196—Door sets, etc.	170 22	
66511—Push plates, store door sets, etc.	375 50	
67544—Locks, etc.	19 88	
68459—Counter flaps	1 45	
68868—Drawer pulls, etc.	59 83	
		$746 98

VANDALIA RAILROAD COMPANY, PHILADELPHIA, PA.

64284—Car repairs	$8 12	
65953— "	13 46	
		$21 58

CHRISTOPHER VALLIER, TOMSTOWN P.O., ONT.

64286—Ties	$33 30	
		$33 30

VERONA TOOL WORKS, PITTSBURGH, PA.

64620—Picks	$27 08	
66976—Elevation slides	9 00	
68279—Tamp picks and bars	70 34	
68634—Chisels, picks	79 80	
		$186 22

VIRGINIAN RAILWAY CO., NORFOLK, VA.

65266—Car service balance	$4 50	
66091— " "	15 30	
67467— " "	3 00	
67786— " "	8 25	
		$31 05

VAN RASSEL BROS., COCHRANE, ONT.

65704—Claim No. 13628, loss door	$9 00	
71201—Refund deposit on contract	327 50	
71211—Work on new station, Monteith	2,125 00	
70934— " " "	2,328 36	
		$4,789 86

VICKSBURG, SHREVEPORT & PACIFIC RAILWAY CO., NEW ORLEANS, LA.

65840—Car repairs	$6 06	
70822— "	2 60	
		$8 66

VIRGINIA-CAROLINA RAILWAY, ABINGDON, VA.

67499—Car service balance	$9 00	
69927— " "	3 00	
70470— " "	6 00	
		$18 00

THE VENDOME HOTEL COMPANY, LTD., HAILEYBURY, ONT.

67691—Board and lodging, engineering party	$13 00	
		$13 00

J. B. VERDON & SONS, OTTAWA, ONT.

67829—Claim No. 14394, loss biscuits	$22 92	
		$22 92

HENRY VERNON & SON, HAMILTON, ONT.

70469—Directory	$3 00	
71199—Directories	6 00	
		$9 00

VAPOR CAR HEATING CO., MONTREAL, QUE.

71164—Gaskets	$30 00	
		$30 00

HARRY VISSERING & COMPANY, CHICAGO, ILL.

71166—Bell ringers	$18 00	
		$18 00

GEO. VALLIERE, PORQUIS JCT., ONT.

71402—Donation *re* cow and calf injured	$65 00	
		$65 00

WARWICK BROS. & RUTTER, LTD., TORONTO, ONT.

63287—Stationery supplies	$16 00	
63423— " "	15 92	
63927— " "	58 00	
63940— " "	1 32	
64054— " "	62 50	
64344— " "	15 92	
64626— " "	66 96	
64911— " "	25 72	
65589— " "	18 00	
65476— " "	87 00	
65806— " "	2 21	
66204— " "	25 00	
67231— " "	103 60	
66736— " "	50 00	
67248— " "	7 50	
67584— " "	47 50	
68561— " "	53 00	
68322— " "	8 64	
68884— " "	50 20	
69703— " "	51 30	
70008— " "	68 18	
71384— " "	31 50	
		$865 97

JAMES B. WILLIS, NORTH BAY, ONT.

63431—Travelling expenses	$27 00	
63948— " "	37 00	
64867— " "	83 85	
65568— " "	48 00	
66337— " "	50 00	
66814— " "	33 75	
67785— " "	58 75	
68118— " "	40 75	
69071— " "	31 80	
69654— " "	59 50	
70313— " "	41 40	
		$511 80

WESTERN RAILWAY OF ALABAMA, ATLANTA, GA.

63539—Car repairs	$3 91	
69937—Car service balance	2 40	
70476— " "	28 20	
		$34 51

WESTERN MARYLAND RAILWAY COMPANY, BALTIMORE, MD.

63541—Car repairs	$3 10	
64653— "	2 26	
64342— "	2 80	
65957— "	3 17	
66095—Car service balance	9 00	
66418— " "	4 50	
67469— " "	15 00	
67790— " "	3 00	
68787— " "	10 50	
69286— " "	18 90	
69929— " "	1 80	
70474— " "	15 00	
71582— " "	4 80	
		$93 83

WABASH RAILWAY COMPANY, ST. LOUIS, MO.

63543—Car repairs	$65 29	
64535—Car service balance	15 75	
64649—Car repairs	5 90	
64990— "	51 11	
65268—Car service balance	14 85	
65654—Car repairs	46 83	
66600— "	35 15	
66739— "	14 65	
67072— "	27 48	
67788—Car service balance	8 50	
68783— " "	73 50	
68626—Car repairs	4 87	
69284—Car service balance	56 70	
69326—Car repairs	3 67	
69700—Car repairs	71 26	
71059—Car service balance	45 00	
70824—Car repairs	105 85	
		$646 36

WHEELING & LAKE ERIE RAILROAD COMPANY, CLEVELAND, OHIO.

63545—Car repairs	$1 33	
64651— "	61 61	
65270—Car service balance	6 30	
66093— " "	45	
65652—Car repairs	3 35	
66416—Car service balance	7 50	
66737—Car repairs	2 30	
67050— "	69 21	
67920— "	1 80	
68785—Car service balance	9 20	
68230—Car repairs	1 75	
69109— "	34	
69698— "	2 81	
70472—Car service balance	6 00	
		$173 95

W. WARD, ENGLEHART, ONT.

63631—Travelling expenses	$3 00	
		$3 00

THE WILSON MUNROE COMPANY, TORONTO, ONT.

63739—Claim No. 12619, loss papers	$30 05	
64718— " 12920. "	16 65	
		$46 70

F. P. WEAVER COAL COMPANY, BUFFALO, N.Y.

63759—Claim No. 11862, overcharge car coal	$1 81	
64727—Coal	98 00	
66202— "	307 45	
66957— "	9 75	
67017—Claim No. 7909, loss of coal	37 94	
68467— " 13900, " "	23 49	
		$478 44

THE WATSON COMPANY, LIMITED, NEW LISKEARD, ONT.

63761—Claim No. 12894, loss damaged canned goods	$5 00	
64279— " 12316, groceries used for relief of fire sufferers	44 22	
64287— " 12401, oats used for relief fire sufferers	79 50	
64343— " 13208 and No. 13207, loss broken globes, etc.	91	
64275— " 12321, potatoes used for relief fire sufferers	8 25	
64776— " 13213, loss raisins	22	
64929— " 13215, loss candy	59	

THE WATSON COMPANY, LIMITED, NEW LISKEARD, ONT.—*Continued.*

65779—Claim No. 13214 and No. 13835, loss raisins and cornmeal	$2 40	
65708— " 13340, No. 13389, No. 13641, loss raisins, cornmeal and lantern globes	8 13	
66072— " 13555, damage to tobacco	31	
67352— " 14366, loss rye flour	25	
67831— " 14493, loss tea	36	
68461— " 14757 and No. 14494, loss candy	1 27	
68591— " 14447, loss marmalade	1 00	
68604— " 14746, loss condensed milk	20	
69324— " 15123, loss catsup	17	
69173— " " 15399, damage to corn flakes	19	
69477—Claims, loss groceries	2 03	
70019— " "	5 81	
70054— " damage to pickles, etc.	7 57	
70168—Claim No. 15567, damage to biscuits	3 63	
70288— " 15875, damage to corn flakes	40	
70629— " 15564, damage to fruit jars	2 99	
71283— " 13512, damage to oats	2 52	
70972— " 15565, damage to sugar	5 93	
71248—Claims loss groceries	2 50	
71420— " peas, etc.	2 27	
		$188 62

WEST DOME CONSOLIDATED MINES, LTD., SOUTH PORCUPINE, ONT.

63787—Claim No. 12203, damage to sewer pipe	$2 40	
64682—Coal confiscated	77 28	
		$79 68

THE A. R. WILLIAMS MACHINERY CO., LTD., TORONTO, ONT.

64065—Machinery	$34 50	
65583—Straight snips	6 16	
67173—Snips	3 60	
68045—Saw machine	472 50	
68460—Saw blades	16 54	
		$533 30

WAGAR & GRIFFITH FURNITURE CO., NORTH BAY, ONT.

64067—Mattresses	$4 80	
66198—Table	7 50	
		$12 30

THE WHITMAN & BARNES MFG. CO., ST. CATHARINES, ONT.

64069—Drills, etc.	$18 35	
65591— "	23 62	
66200— "	17 66	
67151—Hammers, wrenches, etc.	74 57	
67632— " "	29 13	
68275—Wire drills, etc.	10 48	
69403—Wrenches, etc.	187 27	
69904— "	138 68	
70887—Drills	3 86	
71172—Keys	7 50	
		$511 12

WELLS BROS. CO. OF CANADA, GALT, ONT.

64071—Pipe stocks	$13 54	
		$13 54

WABI IRON WORKS, LIMITED, NEW LISKEARD, ONT.

64073—Stoves, etc.	$101 44	
64630—Piston rings, etc.	201 25	
65088—Repairs to steam shovel	1,605 19	
65045— " radial drill	75 00	

WABI IRON WORKS, LIMITED, NEW LISKEARD, ONT.—*Continued.*

65593—Gates and castings	33 35	
66208—Castings, etc.	151 88	
66859—Claim No. 14260, repairs	45 00	
67201—Castings	27 16	
67246—Piston rings	122 16	
68830—Claim No. 15264, repairs	64 00	
70252—Casting	15 50	
70891— "	77 10	
71170—Gates	34 35	
		$2,553 38

WALWORTH MANUFACTURING CO., BOSTON, MASS., U.S.A.

64075—Dies	$1 06	
		$1 06

F. W. WOOLWORTH CO., LIMITED, TORONTO, ONT.

64269—Claim No. 12046, damage to pictures, etc.	$1 69	
64772— " 11439, damage overcharge earthenware	4 11	
67348— " 12913, damage overcharge tableware	3 55	
68373— " 14624, damage loss confectionery	51	
69328— " 15126, damage, crepe paper	64	
69299— " 15125, damage pictures	1 59	
71285— " 16147, overcharge toys	48	
71422— " 16235, damage to slates	37	
		$12 94

WORK & FRETZ, DETROIT, MICH.

64271—Claims	$16 35	
64553— "	49 16	
64774— "	5 79	
64858— "	6 93	
65063— "	46 64	
65251— "	80 50	
65681— "	2 90	
65712— "	26 16	
66429— "	7 22	
66747— "	33 99	
67003— "	5 79	
67354— "	147 71	
67875— "	17 80	
68465— "	31 55	
68621— "	31 12	
68408— "	12 02	
68782— "	14 91	
69111— "	6 80	
69175— "	183 62	
69595— "	12 49	
70023— "	8 93	
70056— "	45 88	
70172— "	10 01	
70445— "	14 42	
70637— "	6 52	
71287— "	32 54	
70764— "	20 21	
71418— "	11 04	
		$889 00

WESTERN PACIFIC RAILROAD COMPANY, SAN FRANCISCO, CAL.

65272—Car service balance	$ 45	
66125— " "	4 05	
69288— " "	1 20	
71063— " "	3 60	
71147—Car repairs	4 76	
		$14 06

R. R. Woods, New Liskeard, Ont.

64337—Claims Nos. 12876 and 12877, loss stove parts		$4 71	
65713—Claim No. 13569, loss stove parts		1 00	
65783— " 12875, damage to stove pipe		2 65	
71252— " 16058, damage to pump handle		1 20	
			$9 56

Warrell & Yates, Cochrane, Ont.

64339—Claim No. 12959, loss groceries		$21 20	
65781— " 11380, loss butter		15 16	
70052— " 15401, damage to biscuits		2 55	
70170— " 15917, overcharge car demurrage		2 00	
			$40 91

W. Warrell & Son, Cochrane, Ont.

64341—Claim No. 12952, loss bran and poultry food		$10 40	
			$10 40

Samuel G. Webber, North Bay, Ont.

64347—Award W. C. B., final payment *re* alleged injuries		$19 31	
			$19 31

Wabash, Pittsburg Terminal Railway Company, Pittsburg, Pa.

64537—Car service balance		$4 95	
65672—Car repairs		4 47	
			$9 42

F. H. Whittelsey Co., Windsor Locks, Conn.

64052—Yellow tissues		$37 50	
64624—Books		70 00	
			$107 50

Washington Southern Railway Company, Richmond, Va.

64346—Car repairs		$3 38	
65955— "		89	
65842— "		39	
68202— "		2 53	
70826— "		2 73	
			$9 92

Robert White, North Bay, Ont.

64384—Award W. C. B. *re* alleged injuries		$21 40	
			$21 40

Watson, Jack & Company, Limited, Montreal, Que.

64622—Bluestone		$67 50	
65609— "		202 50	
67506— "		155 25	
69124— "		189 29	
			$614 54

The World's Only Dustless Bbush Company, North Bay, Ont.

64628—Dustless brush		$3 75	
65461—Broom		3 75	
67109—Dustless brushes		7 50	
68628—Brush		3 75	
70889— "		7 50	
			$26 25

C. H. Woodward & Co., Cannington, Ont.

64750—Claim No. 13085, loss biscuits	$39 76	
		$39 76

H. W. Wagner, Wawbewawa, Ont.

64779—Award, W. C. B., *re* alleged injuries	$13 11	
		$13 11

G. G. Watson, North Bay, Ont.

65023—Travelling expenses	$10 90	
69528— " "	14 90	
70311— " "	1 90	
		$27 70

Warren Bros. Company, Limited, Toronto, Ont.

65055—Claim No. 13157, loss. groceries	$63 50	
		$63 50

Wood, Vallance & Company, Hamilton, Ont.

65585—Cup hooks, etc.	$1 96	
66206—Cuspidors	3 08	
67015—Claim No. 13030, loss wire	10 70	
67175—Saw vices	5 50	
66724—Strap hinges, etc.	25 57	
68281—Whetstone, etc.	22 50	
68632—Hooks, handles, etc.	50 45	
70885—Chain pipe, etc.	20 90	
		$140 66

E. T. Wright Company, Limited, Hamilton, Ont.

65587—Lanterns	$45 00	
66243— "	48 51	
69115— "	52 92	
		$146 43

Wilson Car Lines, Chicago, Ill.

66097—Car service balance	$3 87	
		$3 87

N. Wickett, New Liskeard, Ont.

65710—Claim No. 13682, loss raisins	$5 07	
68463—Claims Nos. 14164 and 12831, loss chocolates and 1 case shortening	11 03	
		$16 10

Joseph Wild & Company, New York, N.Y.

65804—Linoleum	$125 42	
		$125 42

W. H. Warke, Cochrane, Ont.

66102—Claim No. 13940, refund freight charges a/c fire sufferers.	$11 03	
		$11 03

The Western Trunk Line Committee, Chicago, Ill.

66602—Tariffs	$2 76	
70061— "	73	
		$3 49

A. C. White, Porcupine, Ont.

66427—Claim No. 12703, overcharge weight on pulpwood	$87 03	
		$87 03

J. T. Welbourn, Uno Park, Ont.

66431—Claim No. 13916, loss box of chocolates	$1 80	
68371— " 14641, damage to fruit jars	1 14	
		$2 94

Western Classification Committee, Chicago, Ill.

66637—Subscription	$2 00	
		$2 00

D. H. Way, Cobalt, Ont.

66697—Travelling expenses	$32 10	
67036— " "	52 30	
		$84 40

The Welland Vale Manufacturing Co., Limited, St. Catharines, Ont.

66779—Scythes, etc.	$77 03	
		$77 03

Wichita Falls & Northwestern Railway Co., Wichita Falls, Texas.

67471—Car service balance	$1 50	
68789— " "	9 75	
		$11 25

K. Way, Toronto, Ont.

66670—Services rendered	$50 00	
		$50 00

Wm. Watt, Monteith P.O., Ont.

66876—Ties	$99 17	
		$99 17

G. Wickberg, Bourke's P.O., Ont.

66876—Ties	$116 82	
68946— "	49 20	
		$166 02

Williams & Wilson, Limited, Montreal, Que.

67504—Waste machine	$780 00	
		$780 00

Wellsville & Buffalo Railroad Corporation, Buffalo, N.Y.

67830—Car repairs	$3 15	
		$3 15

Geo. H. Wilson, Ottawa, Ont.

67936—Expenses account delayed train	$7 00	
		$7 00

Peter Watt, West Kildonan, Man.

68319—Refund telephone rental	$7 70	
		$7 70

WAGAR FURNITURE COMPANY, LIMITED, NORTH BAY, ONT.

68469—Mattresses	$120 90	
69747—Matting, etc.	36 75	
70010—Chairs, etc.	19 80	
71168—Mattresses	81 00	
		$258 45

JAMES WINSLOW, LONDON, ONT.

68539—Claim No. 13832, loss tent equipment	$95 00	
		$95 00

C. A. WISMER, NEW LISKEARD, ONT.

68587—Claim No. 14448, loss disinfectant	$3 15	
69171—Disinfectant	1 15	
71250—Claim No. 15851, damage to druggist supplies	3 07	
		$7 37

ANDREW WILSON & COMPANY, TORONTO, ONT.

68625—Claim No. 13603, loss of tobacco	$165 68	
		$165 68

WORKMEN'S COMPENSATION BOARD, TORONTO, ONT.

68034—Assessments	$198 23	
		$198 23

WHITE SWAN SPICES & CEREALS, LIMITED, TORONTO, ONT.

68834—Claim No. 15194, loss flour, forest fire	$7 06	
70762— " 15806, loss yeast, forest fire	6 25	
		$13 31

GEORGE WARRELL, COCHRANE, ONT.

66433—Claim No. 13455, refund freight charges a/c fire sufferer..	$61 03	
66435— " 13455, refund freight charges a/c fire sufferer..	60 00	
		$121 03

C. L. WILLIAMS, CONNAUGHT STATION, ONT.

69405—Lumber	$405 10	
70793—Claim No. 16172, loss lard	4 95	
		$410 05

S. WHEELER'S LIVERY, SOUTH PORCUPINE, ONT.

69435—Cartage	$4 00	
		$4 00

WHITING FOUNDRY EQUIPMENT COMPANY, HARVEY, ILLINOIS.

69959—Hoist, etc.	$7,675 00	
		$7,675 00

EDWARD WICKLUM, CHARLTON, ONT.

70021—Claim No. 15025, overcharge portable engine	$21 64	
		$21 64

DR. J. B. WILSON, SWASTIKA, ONT.

69526—Refund account unexpired telephone rental	$5 82	
		$5 82

THE WOMEN'S INSTITUTE, PORQUIS JUNCTION, ONT.

69728—Donation	$10 00	
		$10 00

ISAAC WALLE, COCHRANE, ONT.

70277—Contract clearing station grounds, Kelso	$154 50	
		$154 50

WISCONSIN ELECTRIC COMPANY, RACINE, WISCONSIN.

70411—Grinders	$166 60	
		$166 60

THE WHITE ENAMEL REFRIGERATOR COMPANY, ST. PAUL, MINN.

70533—Refrigerator	$215 52	
		$215 52

C. E. WALLINGFORD, TIMMINS, ONT.

70599—Claim No. 14990, loss sewing machine	$10 00	
		$10 00

WINSTON-SALEM SOUTH BOUND RAILWAY, WILMINGTON, N.C.

71061—Car service balance	$3 00	
		$3 00

E. R. WATTS & SON, TORONTO, ONT.

71213—Repairing transit	$6 75	
		$6 75

W. J. WARREN, NORTH COBALT, ONT.

71254—Claim No. 16378, damage to glass	$ 85	
		$ 85

WM. YOUNG, NORTH BAY, ONT.

63633—Travelling expenses	$11 15	
64116— " "	8 40	
65103— " "	6 20	
65930— " "	6 35	
66569— " "	12 30	
66912— " "	9 30	
67933— " "	10 55	
68190— " "	7 95	
69235— " "	9 15	
69554— " "	14 45	
70471— " "	7 65	
70898— " "	13 70	
		$117 15

W. J. YATES, NEW LISKEARD, ONT.

63763—Claim No. 11828, loss liquors	$11 15	
63789— " 11786, loss liquors	1 00	
67005— " 14166, damage to meat	43	
		$12 58

THE YOUNG LUMBER COMPANY, NORTH BAY, ONT.

64077—Switching charges	$6 80	
64954—Lumber	104 52	
65574— "	445 00	

THE YOUNG LUMBER COMPANY, NORTH BAY, ONT.—*Continued.*

66104—Claim No. 13829, overcharge on lumber	15 81	
66625—Lumber	503 64	
67153— "	799 35	
67024—Lumber, etc.	1,145 90	
68528—Lumber	508 17	
68870—Contract, material, Iroquois Falls freight shed	296 00	
70014—Lumber	366 50	
70895— "	376 92	
71176— "	527 26	
71386— "	627 68	
		$5,723 55

THE YOUNG COMPANY, LIMITED, NORTH BAY, ONT.

64221—Groceries	$355 62	
64684— "	164 97	
64758—Claim No. 13337, overcharge car hay	1 83	
64860— " 12612, shortage tobacco	18 26	
65533—Groceries	88 04	
65615— "	129 69	
65722—Claim No. 12603, loss groceries	38 10	
66405—Hay	142 90	
66861—Claim No. 13683, loss candy	1 19	
67249— " 13694, shortage walnuts	1 63	
67343—Groceries and hay	215 27	
67546—Groceries	36 96	
68317—Hay, etc.	731 84	
68375—Claims Nos. 13177 and 13925, loss molasses, tomatoes, etc.	26 32	
68471—Groceries	145 51	
68406—Claim No. 14138, damage, sugar	31 00	
68526—Groceries	156 09	
68980—Claim No. 14326, loss milk	4 66	
69330—Groceries	29 15	
69471— "	124 44	
69479—Claim No. 13921, loss molasses	3 10	
69749—Groceries	131 20	
70012— "	120 10	
70174—Claim No. 15195, loss rice	3 15	
70897—Groceries	234 14	
70674—Claims Nos. 16310 and 15599, damage to mince meat	14 00	
71174—Groceries	172 60	
		$3,121 76

FREDERICK YOUNG, CHICAGO, ILL.

64706—Burners	$21 00	
		$21 00

THE YALE & TOWNE MANUFACTURING COMPANY, STAMFORD, CONN.

65531—Triplex block and hoist	$95 56	
71178—Chains, etc.	20 15	
		$115 71

F. A. YORK, NORTH BAY, ONT.

70893—Caps	$1 00	
		$1 00

YOW LEE LAUNDRY, COBALT, ONT.

71289—Claim No. 15846, loss of lime	$1 50	
		$1 50

YOUNG MEN'S CHRISTIAN ASSOCIATION, TORONTO, ONT.

70610—Donation	$20 00	
		$20 00

W. A. ZELNICKER SUPPLY COMPANY, ST. LOUIS, MO.

70899—Crayons	$9 50	
		$9 50
		$3,414,113 46

RECAPITULATION ACCOUNTS PAYABLE

NOVEMBER 1ST, 1916, TO OCTOBER 31ST, 1917.

General Ledger Balance Accounts Payable as of November 1st, 1916		$526,353 48
Disbursements for Year, November 1st, 1916, to October 31st, 1917, as per detailed statement		3,414,113 46
Cash payments by Treasurer during year	$3,639,804 62	
Registration prior to October 31st, 1916, cancelled	136 50	
Cash prior to October 31st, 1916, cancelled		106 50
General Ledger Balance Accounts, payable as of October 31st, 1917	300,632 32	
	$3,940,573 44	$3,940,573 44

Millerta Public School, 1917.

CONTRACTS, AGREEMENTS, et. al.

RE NEWS PRIVILEGES, ETC., ON T. & N. O. TRAINS.

Tenders called for period one, three, and five years, and contract awarded Canada Railway News Co., for five years, being lowest tender.

THIS AGREEMENT made this 9th day of November, 1916.

BETWEEN:

TEMISKAMING AND NORTHERN ONTARIO RAILWAY COMMISSION, hereinafter called the Commission,

Of the First Part,

and

THE CANADA RAILWAY NEWS COMPANY, hereinafter called the Contractor,

Of the Second Part.

WITNESSETH that the said parties have and they do hereby covenant, promise and agree, each with the other in manner following, that is to say:

1. In these presents the words "Commission" and "Contractor" shall include the parties and their respective successors and assigns. The word "Superintendent" shall mean the Superintendent of Traffic, having jurisdiction over the railway of the Commission, and the word "Secretary" shall mean the Secretary of the said Commission.

2. The Commission hereby grants to the Contractor for the period of five years, to be computed from the first day of January, 1917, the exclusive right, license and privilege (except as otherwise hereinafter provided) of selling upon the passenger trains operated by the Commission in its line of railway between North Bay and Cochrane, including branch lines, newspapers, books, periodicals and publications, nuts, fruits and confections of all kinds, cigars, stationery and fancy goods and such other articles as are usually sold on railway trains.

3. The Contractor shall in no case allow or suffer to be exhibited, sold or offered for sale or distribution on any of the trains of the Commission, any book, paper, publication or other article which may be objectionable to the Superintendent, who shall be the sole judge as to what books, papers, publications or other articles infringe this provision, and any book, paper, publication or article so infringing shall be at once removed from off the trains of the Commission.

4. All papers, books, periodicals and other articles offered for sale under this agreement shall be sold at reasonable prices which shall be subject, from time to time, to the approval and revision of the Superintendent, and it shall be deemed a violation of this agreement for any agent of the Contractor to demand or receive a higher price than so approved for a like or similar article.

5. The Commission shall provide for the Contractor at such points on its line of railway as the Superintendent may designate, suitable and necessary room for the storage of the current stock of goods to be sold by the Contractor's agent on the Commission's trains, but such goods shall, during the time they are in or about any of the Commission's stations or premises, be at the sole and exclusive risk of the Contractor as to damage by fire or otherwise howsoever no matter how caused.

6. The Contractor shall not employ as its agent any person who is not of good moral character, and no agent who, in the opinion of the Superintendent, is guilty of any breach of propriety, courtesy or good conduct towards any passenger, officer, or employee of the Commission shall be retained in the Contractor's service. Should any such agent or employee of the Contractor so conduct himself, as in the opinion of the train conductor, to be offensive to or annoy passengers or be guilty of conduct which would justify the removal of a passenger, the train conductor may at once terminate his services for the trip and remove him from the train. Any agent or employee of the Contractor engaged in its service under this agreement shall be promptly dismissed from such service on the request of the Superintendent.

7. All train agents of the Contractor shall, while on duty, wear a neat uniform of blue cloth, including cap and badge, which shall be furnished by the Contractor at its own cost. The badge shall be worn in such a manner as to be conspicuously exposed to view at all times, and shall display the name of the Contractor and, also, in distinct figures large enough to be readily seen, the number by which the particular agent is designated.

8. It shall not be permissable for any train agent of the Contractor to pass through any sleeping, parlor or dining car on the train on which he may be engaged in such a manner or at such a time as to disturb or annoy the occupants. Neither shall he sit or loiter therein. The train conductor shall, in each case, decide when any such agent may or may not pass through any such car.

9. No agent of the Contractor shall deposit or leave packages of books, papers or other articles carried by him for sale upon any of the seats of coaches in which passengers are carried, nor shall he at any time occupy a seat in any coach to the exclusion or inconvenience of any passenger, nor importune passengers to purchase nor in trying to make sales annoy passengers by obtrusive persistence.

10. The necessary passes, with the usual conditions endorsed thereon for the proper officers and for the train agents of the Contractor engaged in selling articles on trains (one agent only to be allowed on each train), shall be provided by the Commission during the continuance of this agreement.

11. The train supplies of goods for sale by the Contractor's train agents upon trains of the Commission will be transported by the Commission at the sole risk of the Contractor upon the respective trains upon which they are being offered for sale in baggage cars in packages not exceeding two hundred pounds in weight free of charge, but the Contractor shall in no case suffer or allow to be included therein any articles or supplies for agents upon other railways, nor any other articles or materials whatever except such as are properly Contractor's supplies for sale on the Commission's trains, nor shall the Contractor nor any of its train agents be allowed to carry on any of the trains of the Commission parcels or any articles whatever for the accommodation of any person or persons whomsoever.

12. The Contractor shall not use the right, license or privilege hereby granted, or any train privileges incident thereto for any other business or purpose than those herein specified, nor shall the granting of the same to the Contractor be construed as restricting the Commission from selling in its dining cars, buffet or café parlor cars, in connection with its dining cars service, if any, all articles which it is customary to sell in connection with such service.

13. The Contractor hereby covenants to and with the Commission that it shall and will fully protect, indemnify, save harmless and defend the Commission from and against all loss, costs, charges, damages and expenses which the Commission may at any time hereafter bear, sustain, suffer or be put to for or by reason or on account of any injury, loss or damage to the person or property of any of the officers, agents or employees of the Contractor which may occur upon or about any train, station or premises of the Commission, whether resulting in death or otherwise, and, also, of and from all liability for any injury, loss or damage to stock, materials, effects or supplies of the Contractor while in the course of transportation on any trains of the Commission or while on the premises or in the custody of the Commission, whether such injury, death, loss or damage shall be the result of the negligence of the Commission or any of its servants, agents or employees.

14. The Contractor hereby authorizes and empowers the Commission or its solicitors to defend, settle or compromise, as it may deem expedient, any claim, suit, action or proceeding of any nature or description which may be brought against the Commission for or on account of any such injury, death, loss or damage to persons or property mentioned in the next preceding paragraph, and the Contractor hereby agrees to ratify and confirm all the acts of the Commission or its solicitors in that behalf and to pay to the Commission on demand any costs or disbursements incurred in defending, settling or compromising any such claim, suit or proceeding, and that the same with any damage so settled or agreed upon by the Commission or its solicitors and any claimant, or the amount of any judgment recovered against the Commission in the premises will be paid by the Contractor to the Commission forthwith on demand, and in default of payment of the amount thereof the Commission may at once sue for and recover the same from the Contractor as money paid for its use.

15. In consideration of the premises and of the rights, licenses and privileges hereby granted the Contractor covenants and agrees to pay the Commission for each year covered by this agreement the sum of four thousand dollars ($4,000), payable in equal monthly instalments in advance on the 1st day of each month beginning with the 1st day of January, 1917, to the Treasurer of the Commission at the offices of the Commission in the City of Toronto, together with increased consideration each year based on the increased passenger earnings of the Commission in excess of $500,000 per year, such increased consideration to be computed on the basis of eight mills on the dollar for every dollar increase in passenger earnings of the Commission in excess of $500,000 per year, such increased consideration to be payable forthwith upon delivery by the Commission to the Contractor of statements showing such increased consideration, it being expressly agreed that the figures in the books of the Commission shall be absolutely final, binding and conclusive upon the parties as to the passenger earnings of the Commission for each year and the certificate of the person from time to time occupying, in the employment of the Commission, the position of auditor of Receipts and Car Accountant, shall be taken as conclusive evidence of such figures in the books of the Commission, irrespective and whether such auditor of Receipts and Car Accountant shall have occupied such position at all or any of the dates covered by such certificates.

16. Should the Contractor at any time make default in payment of any cash instalments hereby agreed to be paid or fail to fully carry out and perform in all respects any of the covenant and agreements on its part agreed to be kept, observed

and performed, this agreement may, at the option of the Commission, be declared at an end, and after five days' notice in writing under the hand of the Secretary to the Contractor of the intention to terminate this agreement, all the rights, licenses and privileges hereby granted shall cease, determine and be at an end, and thereupon the Commission may, at the expense of the Contractor, and without incurring any liability for damages thereby sustained, cause all advertising matter and property of the Contractor of every nature and kind whatsoever to be removed from all stations, building, premises and trains of the Commission or take such other or further action for the enforcement of the provisions of this agreement as to the Commission may seem advisable, and all passes granted to the Contractor or its agents shall forthwith become cancelled: PROVIDED, HOWEVER, that no such act on the part of the Commission shall entitle the Contractor to a return of any moneys theretofore paid under this agreement nor impair the right of action of the Commission for recovery of any and all damages on account of the non-payment by the Contractor of any instalment herein agreed to be paid on account of the non-performance or breach of any of the terms and covenants of this agreement. Failure on the part of the Commission to exercise any of the rights and privileges based upon any default under the terms hereof or waiver of any such default shall not debar or preclude the exercise by the Commission of any of the rights or privileges based upon any subsequent default under the terms hereof.

17. None of the rights and privileges hereby granted shall be sublet, transferred or assigned by the Contractor without consent in writing of the Secretary being first had and obtained, and the exercise and enjoyment hereof by the Contractor shall be subject at all times to the supervision, direction and control of the Superintendent and Secretary as herein provided.

18. Each of the parties hereby covenants with the other to observe, abide by, perform and keep the terms and provisions of this agreement in all respects according to the spirit, true intent and meaning thereof.

IN WITNESS WHEREOF the parties have caused these presents to be executed under their respective corporate seals and the hands of the proper officers in that behalf the day and year first above written.

SIGNED, SEALED AND DELIVERED in the presence of:

A. B. Odlum.

Kathaleen Lynch.

Temiskaming and Northern Ontario Ry. Com'n.
J. L. Englehart,
Chairman.
W. H. Maund,
Secretary-Treasurer.

Canada Railway News Co., Ltd.
T. P. Phelan,
President.
J. B. Warde,
Secretary.

RE INSTALLATION HOT WATER SYSTEM, MATHESON STATION.

Tenders received as follows:—

Firm.	Contract Price.	Extras.	Time of Completion.
	$ c.		
A. Brazeau, Timmins	1,068 00	10%	4 weeks
F. R. Gibson, Haileybury	937 00	15%	5 "
Cochrane Hardware Ltd, North Bay	1,025 00	25%	5 "

Contract awarded F. R. Gibson, lowest tenderer. Usual Agreement containing clauses protecting Commission entered into under date, December 22nd, 1916.

RE ELECTRIC WIRING—MATHESON STATION.

Tenders received as follows:—

Firm.	Contract Price.	Extras.	Time of Completion.
	$ c.		
E. M. Allworth, Timmins	560 00	45%	7 weeks
D. Clutchey, Haileybury	476 00	10%	

Contract for wiring awarded to D. Clutchey, lowest tenderer. Usual agreement containing clauses protecting Commission, entered into under date, December, 22nd, 1916.

Sale of Lands along T. & N. O. Railway, April 30th, 1917.
Tenders received and accepted:

	Lot. No.	Amount of Tender.	Total.
Cochrane.		$ c.	$ c.
Edgar Caswell	Block 2	150 00	150 00
do	Block 4	100 00	100 00
V. V. Tarbill	Lots 3, 4, 5	35 00 each	105 00
J. H. Harris	769, 770 (Parcel No. 2265)	50 00 "	100 00
Calvert Twp.			
A. Baillod	N. ½ Lot 10, Con. 1	500 00	500 00
Porquis Jct.			
E. Shields	S. ½ Lot 10, Con. 3, Twp. Clerque—52 acres more or less	250 00	250 00
J. H. Beemer	S. ½ Lot 10, Con. 6, Twp. Clerque—50 acres more or less	300 00	300 00
J. Rowlandson	N. ½ Lot 10, Con. 6, Twp. Clerque—50 acres more or less	20 00 per acre	1,000 00
Clerque Twp.			
J. Critchley	N. ½ Lot 2, Con. 2, Twp. Clerque 160 acres	310 00	310 00
Monteith.			
Wm. L. Clark	Lot 14	25 00	25 00
Matheson.			
Phillip Gauthier	S. ½ Lot 5, Con. 1. Twp. Carr—72 acres	15 00 per acre	1,080 00
Mrs. P. Doal	205, 203, 204, 121	50 00 each	200 00
Mrs. J. Graves	Lot 52	1 00	1 00
Englehart.			
Mrs. J. H. Raymond	Lot 238, 239	25 00 each	50 00
Geo. Stephenson	Lot 319, 320	50 00 "	100 00
do	Lot 322	40 00	40 00
P. Pillsworth	Lot 241	30 00	30 00
do	Lot 240	25 00	25 00
			4,366 00

BITUMINOUS COAL CONTRACT, 1917-18.

Buffalo, N.Y., January 5th, 1917.

Buffalo and Susquehanna Coal and Coke Co., agree to sell and Temiskaming and Northern Ontario Railway Commission, Toronto, Ontario, agree to buy the following coal at the prices and upon the terms herein named.

Quantity.—Fifty thousand (50,000) net tons.

Quality.—Coal from Seller's Sagamore Mine, located at Sagamore, Pa.

Size of Coal.—Three-quarters lump.

Delivery.—Between date of completion of present contract and 5/1/18.

Shipment.—Equal monthly quantities.

Price.—Four dollars and sixty cents per net ton f.o.b. cars Black Rock, N.Y.: it being understood buyer will pay any increase in freight rate during life of contract: also, any increased cost of production covered below.

All coal shipped in any one month to be settled for on or before the 15th day of the following month.

Expiration April 30th, 1918.

Ship to Temiskaming and Northern Ontario Railway Commission, North Bay, Ontario, via. G.T. or C.P.

Witness:

A. B. Odlum.

Accepted:
Temiskaming and Northern Ontario Ry. Com'n.
J. L. Englehart.
Chairman.
W. H. Maund,
Secretary-Treasurer.

Accepted:
Buffalo & Susquehanna Coal & Coke Co.,
J. W. Trounce,
General Sales Agent.

BOX CARS—COMPARISON OF TENDERS— 100, 80,000 LBS. CAPACITY.

I.—Composite Underframe, Wood Body Frame, Corrugated Steel Ends; Length, 36 ft. as per T. & N. O. Specification No. 51, Cardwell Friction Draft Gear.

Eastern Car Company, Ltd.

Price.	Delivery	Freight.	Cost North Bay.	Shipment.
$2,830.00	Trenton, N.S.	$65.50	$2,895.50	May, 1918

Remarks.—Two truss rods and two intermediate sills omitted.

Canadian Car and Foundry Co., Ltd.

Price.	Delivery	Freight.	Cost North Bay.	Shipment.
$2,800.00	Montreal	$22.00	$2,822.00	Jan., 1918

National Steel Car Co., Ltd.

Price.	Delivery	Freight.	Cost North Bay.	Shipment.
$3,552.00	Hamilton	$15.50	$3,567.50	Oct., 1917

II.—Steel Underframe, Wood Body Frame, Corrugated Steel Ends; Length, 40 ft. 6 in. as per T. & N. O. Specifications No. 52, Cardwell Friction Draft Gear.

Eastern Car Co., Ltd.

Price.	Delivery	Freight.	Cost North Bay.	Shipment.
$3,030.00	Trenton, N.S.	$65.50	$3,095.50	May, 1918

Canadian Car and Foundry Co., Ltd.

Price.	Delivery	Freight.	Cost North Bay.	Shipment.
$3,010.00	Montreal	$22.00	$3,032.00	Jan., 1918

National Steel Car Co., Ltd.

Price.	Delivery	Freight.	Cost North Bay.	Shipment.
$3,795.00	Hamilton	$15.50	$3,810.50	Oct., 1917

III.—Steel Underframe and Steel Body Frame, Length 40 ft. 6 in., as per T. & N. O. Specification No. 53, Cardwell Friction Draft Gear.

Eastern Car Co., Ltd.

Price.	Delivery	Freight.	Cost North Bay.	Shipment.
$2,930.00	Trenton, N.S.	$65.50	$2,995.50	May, 1918

Canadian Car and Foundry Co., Ltd.

Price.	Delivery	Freight.	Cost North Bay.	Shipment.
$2,900.00	Montreal	$22.00	$2,922.00	Jan., 1918

National Steel Car Co., Ltd.

Price.	Delivery	Freight.	Cost North Bay.	Shipment.
$3,570.00	Hamilton	$15.50	$3,585.50	Oct., 1917

IV.—Steel Underframe and Steel Body Frame; Length, 36 ft. as per C. G. R. Specification with Certain Slight Modifications, Cardwell Friction Draft Gear.

Canadian Car and Foundry Co., Ltd.

Price.	Delivery	Freight.	Cost North Bay.	Shipment.
$2,595.00	Montreal	$22.00	$2,617.00	

Lowest tender—Canadian Car and Foundry Co., Ltd.—accepted.

ARTICLES OF AGREEMENT made in duplicate, this 28th day of June, in the year of our Lord, one thousand nine hundred and seventeen.

BETWEEN:

THE CANADIAN CAR AND FOUNDRY COMPANY, LIMITED, hereinafter called the Contractor,

and

TEMISKAMING AND NORTHERN ONTARIO RAILWAY COMMISSION, hereinafter called the Commission.

WITNESSETH:

1. In this Contract the word "Inspector" shall mean the Inspector for the time being appointed by the Commission to act for the Commission in the supervision of the construction and in the inspection and certification of the forty-ton steel frame box cars hereinafter referred to.

2. The Contractor will supply and provide all and every kind of work, labour, materials, articles and things whatsoever for the due construction and completion, and will well and duly build and complete, in a perfect and workmanlike manner, one hundred forty-ton steel frame box cars, with all necessary appliances for use on the line of railway of the Commission, in strict compliance with the specifications hereto annexed and with the plans and drawings relating thereto, (save and except that the Westinghouse air brake apparatus, mentioned in said specifications shall be furnished by the Commission, subject to the said cars being duly equipped therewith by the Contractor as provided for by said specifications), to the complete satisfaction of the Inspector, and the Contractor will deliver the said steel frame box cars duly completed to the Commission free on the railway tracks of the Commission at the Town of North Bay, on or before the thirty-first day of October, 1917, time being agreed to be material and of the essence of this contract, subject, however, to delays occasioned by strikes, accidents, delays of other carriers or other delays which are unavoidable or beyond control of the Contractor.

3. The Contractor shall, within fifteen days from the date hereof, deliver to the Mechanical Engineer of the Commission, at his office in North Bay, two complete sets of blue prints of said steel frame box cars, and in case same shall in any respect be found not to conform with the specifications the Contractor will promptly, on defects being pointed out, rectify same and supply to the Commission correct copies.

4. The Inspector will be the sole judge of all work and material done and supplied under this contract, and his decision on all question in dispute, with regard to any such work or material, shall be final, and the whole work shall be executed to his satisfaction as evidenced by his certificate in writing, which certificate shall be a condition precedent to the right of the Contractor to be paid therefor.

5. The Inspector and all persons from time to time authorized by him in the behalf shall have free entry and access to the works of the Contractor at all times while this Contract is being performed, and shall have all reasonable facilities afforded to him and his representatives as aforesaid to satisfy him that the same is being carried out and performed in accordance with this contract.

6. The acceptance of and payment for one or more of said cars by the Commission shall not be considered as any waiver of the obligations of the Contractor with reference to the others.

7. This Contract shall not be considered as fully completed until the guarantee clause in the attached specifications respecting materials and workmanship have been fully complied with. The books kept in the office of the Master Mechanic of the Commission shall be taken as final and conclusive of the time the said materials have lasted in service.

8. The Commission in consideration of the premises covenants with the Contractor, that the Contractor from time to time and in all respects having fulfilled and performed the provisions of this contract (except the fulfillment of the guarantee, which is to continue as shown in said specifications), on the Contractor's part intended to be fulfilled and performed, will be paid for and in respect of each of the said steel frame box cars the sum of two thousand six hundred and nine dollars and fifty cents, payments to be made within five days after the delivery of each car. f.o.b. tracks of the Commission at North Bay as aforesaid.

IN WITNESS WHEREOF the said parties have caused these presents to be executed under their respective corporate seals and under the hands of the proper officers in that behalf.

D. R. ARNOLD.
J. B. BRODIE.

CANADA CAR AND FOUNDRY CO., LTD.
V. E. CURRY,
Vice-President.
R. B. EDWARDS,
Asst. Secretary.
(Seal.)

A. B. ODLUM.

TEMISKAMING AND NORTHERN ONTARIO RY. COM'N.
J. L. ENGLEHART,
Chairman.
W. H. MAUND,
Secretary-Treasurer.
(Seal.)

STATEMENT SHOWING COMPARISON OF TENDERS RECEIVED FOR THE CONSTRUCTION OF COMBINED FRAME STATION AND AGENT'S RESIDENCE AT MONTEITH, ONTARIO.

Contractor.	Lump Sum Price.
Van Rassel Bros., Cochrane	$6,550 00
Henderson & Angus, North Bay	8,437 00
J. P. Quinlan, North Bay	8,350 00
D. Barker & Co., North Bay	8,800 00
T. N. Colgan, North Bay	7,033 00

Contract awarded Van Rassel Bros., lowest tenderer.

Usual agreement containing clauses protecting Commission entered into under date August 9th, 1917.

TENDERS, HOT WATER HEATING, MONTEITH, ONTARIO.

Name.	Address.	Amount Tender.
F. R. Gibson	Haileybury	$1,475 00
A. Brazeau	Timmins	1,490 00
S. J. Cherry	North Bay	1,576 00
B. S. Leak	North Bay	1,575 00

Contract awarded F. R. Gibson, Haileybury, lowest tenderer.

Usual agreement containing clauses protecting Commission, entered into under date August 30th, 1917.

COMPARISON OF TENDERS FOR HOT AIR HEATING, AGENT'S HOUSE AT CONNAUGHT, ONTARIO.

Name and Address.	Amount of Tender.
A. Brazeau, Timmins, Ont.	$200 00
F. R. Gibson, Haileybury, Ont.	230 00

Contract awarded A. Brazeau, lowest tenderer.

Usual agreement containing clauses protecting Commission entered into under date August 30th, 1917.

CANADA RAILWAY NEWS COMPANY.

Contract for lease of space in Cobalt Station for purpose selling books, newspapers, etc., extended for period one year from July 31st, 1917, to July 31st, 1918, same terms and conditions.

COMPARISON OF TENDERS FOR ELECTRIC WIRING, MONTEITH STATION.

Name and Address.	Amount of Tender.
E. M. Allworth, Timmins	$290 00
D. Clutchey, Haileybury	484 00

Contract awarded E. M. Allworth, lowest tenderer.

Usual agreement containing clauses protecting Commission entered into under date August 31st, 1917.

QUOTATIONS ON WHEELS AND CASTINGS, SEASON 1917-18.

——	New Wheels Net Ton.	Scrap Wheels. Gross Ton.	New Castings. Net Ton.	Scrap Castings Gross Ton.
	$ c.	$ c.	$ c.	$ c.
Dom. Wheel and Fdrs	44 80	15 90	66 00	15 75
Can. Iron Fdrs	47 50	15 75	75 00	13 50

Both quotations for wheels and scrap, f.o.b. North Bay.

Wabi Iron Works, Goldie & McCulloch, Jno. Inglis, Midland Engine Works, Canadian Allis-Chalmers, and National Steel Car Co., acknowledged enquiry but could not quote.

THIS AGREEMENT made in duplicate this 8th day of September, A.D. 1917.

BETWEEN:

DOMINION WHEEL & FOUNDRIES, LIMITED, hereinafter called the Contractor,

—and—

TEMISKAMING AND NORTHERN ONTARIO RAILWAY COMMISSION, hereinafter called the Commission.

WITNESSETH that in consideration of the mutual covenants and agreements herein contained and other good and valuable consideration, the parties hereto have mutually agreed and do each agree with the other as follows:—

1. The Contractor agrees to sell and deliver to the Commission as and when ordered all the cast iron car wheels required by the Commission for the period of one year commencing the first day of November, 1917, such cast iron car wheels to be constructed in strict compliance with the Master Car Builders' rules and regulations and to the complete satisfaction of the Chief Engineer and Superintendent of Maintenance of the Commission, and the Commission agrees to purchase and pay for said cast iron car wheels at the rate or price of forty-four dollars and eighty cents ($44.80) per net ton.

2. The said cast iron car wheels shall be delivered to the Commission free on board the Commission's tracks at the Town of North Bay.

3. The Contractor further agrees to sell and deliver to the Commission as and when ordered all the grey iron castings required by the Commission during the said period of one year, such iron castings to be constructed to the complete satisfaction of the Chief Engineer of the Commission, and the Commission agrees to purchase and pay for such grey iron castings at the rate or price of sixty-six dollars ($66.00) per net ton.

4. The said grey iron castings shall be delivered to the Commission free on board the Commission's tracks at the town of North Bay.

5. In consideration of the premises the Contractor agrees to purchase and the Commission agrees to sell for the period above mentioned all the Commission's used cast iron car wheels, and the Contractor agrees to pay for such used cast iron car wheels at the rate or price of fifteen dollars and ninety cents ($15.90) per gross ton, such used cast iron car wheels to be delivered to the Contractor free on board the Commission's tracks at the Town of North Bay, and the Contractor further agrees to purchase and the Commission to sell all the Commission's cast scrap and malleable scrap iron at the rate or price of fifteen dollars and seventy-five cents ($15.75) per gross ton, such cast and malleable scrap iron to be delivered to the Contractor free on board the Commission's tracks at the Town of North Bay.

THIS AGREEMENT and everything herein contained shall enure to the benefit of and be binding upon the parties hereto their successors and assigns respectively.

IN WITNESS WHEREOF the parties hereto have hereunto set their respective corporate seals under the hands of the proper officers in that behalf.

SIGNED, SEALED AND DELIVERED in the presence of:

G. S. GARDNER.

E. M. HURRY.

DOMINION WHEEL & FOUNDRIES, LTD.
F. J. NEALE,
Vice-Pres. & Secy.-Treas.
J. A. KIRKPATRICK,
President.

TEMISKAMING AND NORTHERN ONTARIO RY. COM'N.
J. L. ENGLEHART,
Chairman.
W. H. MAUND,
Secretary-Treasurer.

COMPARISON OF TENDERS FOR ALTERATIONS TO HEATING SYSTEM, COCHRANE STATION.

Name and Address.	Amount Tender.	Charge for Extra Work.
	$ c.	
A. Brazeau, Timmins.....	1,515 00	Cost plus 20 % of labor.
F. R. Gibson, Haileybury.....	1,547 00	" " "
Cochrane Hardware Co. North Bay.....	1,700 00	" 25 % "

Contract awarded Albert Brazeau, Timmins, lowest tenderer.
Usual agreement containing clauses protecting Commission entered into under date October 5th, 1917.

Comparison of Tenders for Grading of Revisions of Main Line between Mileages 63.0 and 66.5 and Mileages 80.8 and 81.2.

Number of Tender		I.		II.		III.		IV.		VI.	
Name of Tenderer		Bourke & McGuinty.		Port Arthur Construction Company.		Jones, Girourard & Company.		Dominion Construction Company.		Henderson & Angus, W. A. Cockburn & Lindsay & McCluskey	
Item.	Quantity.	Unit Price.	Total.	Unit Price.	Total.	Unit Price.	Total.	Unit Price.	Total.	Unit Price.	Total.
		$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Clearing	24 acres	60 00	1,440 00	60 00	1,440 00	80 00	1,920 00	90 00	2,160 00	80 00	1,920 00
Close Cutting	1 acre	45 00	45 00	75 00	75 00	60 00	60 00	40 00	40 00	150 00	150 00
Grubbing	2 acres	200 00	400 00	150 00	300 00	200 00	400 00	200 00	400 00	175 00	350 00
Solid Rock	20,600 c.y.	1 94	39,964 00	1 70	35,020 00	1 75	36,050 00	1 85	38,110 00	2 40	49,440 00
Loose "	4,000 "	75	3,000 00	75	3,000 00	80	3,200 00	75	3,000 00	80	3,200 00
Common Excavating	50,000 "	54	27,000 00	35	17,500 00	40	20,000 00	40	20,000 00	60	30,000 00
Overhaul	50,000 "	01	500 00	01	500 00	01	500 00	01	500 00	01	500 00
Telegraph Poles cut on Right-of-Way	each	1 00	.....	1 00	.....	3 00	.....	1 00	.....	50	.....
Fence Posts cut on Right-of-Way	"	10	.....	10	.....	10	.....	15	.....	05	.....
Ties cut on Right-of-Way	"	20	.....	25	.....	28	.....	20	.....	20	.....
Timber cut on Right-of-Way, per 1,000 feet B.M.	.....	15 00	.....	8 00	.....	10 00	.....	2 50	.....	8 00	.....
Concrete—											
1 : 2 : 4	per c.y.	15 00	.....	13 00	.....	12 00	.....	14 00	.....	10 00	.....
1 : 3 : 5	66 "	15 00	990 00	12 00	792 00	10 00	660 00	13 00	858 00	9 50	627 00
Cast Iron Pipe—											
12 in. dia., 20 lin. ft.	.....	25	5 00	1 00	20 00	25	5 00	60	12 00	15	3 00
Concrete Pipe—											
24 in. dia., 45 lin. ft.	.....	75	33 75	1 25	56 25	75	33 75	2 00	90 00	50	22 50
36 " 180 "	.....	1 00	180 00	1 50	270 00	1 50	270 00	2 50	450 00	50	90 00
			73,557 75		58,973 25		63,098 75		65,620 00		86,302 50

Lowest tender, Port Arthur Construction Co., accepted. Usual agreement containing clauses protecting Commission entered into under date June 16th, 1917.

Street view, Haileybury, Ontario, showing electric car of Nipissing Central Railway Company.

NIPISSING CENTRAL RAILWAY.

Fire at Car Barn.

On March 4th, 1917, during the early hours of the morning, fire destroyed the north end of the car barn and five electric passenger cars, and one partially burned.

During period of reconstruction and until new cars—which were purchased in St. Louis—were received, the service was of necessity greatly restricted.

This period, however, was of short duration and full schedule was under operation within two weeks. Loss and damage under this heading as recorded below:—

Property.	Original Value.	Salvage.	Depreciation.	Net Loss.	Insurance Recoverable.
	$ c.	$ c.	$ c.	$ c.	$ c.
Car Barn	34,980 75	23,194 98	2,623 56	9,162 21	9,162 21
Building Contents	787 80	.....	171 67	616 13	616 13
Car No. 2	7,800 00	1,157 84	2,314 00	4,328 16	4,000 00
" 6	7,800 00	4,664 50	2,314 00	821 50	821 50
" 14	8,878 64	1,424 84	1,450 18	6,003 62	5,000 00
" 16	8,878 64	1,424 84	1,450 18	6,003 62	5,000 00
" 18	10,833 60	2,744 41	1,047 25	7,041 94	6,000 00
" 20	10,833 60	2,744 41	1,047 25	7,041 94	6,000 00
	90,793 03	37,355 82	12,418 09	41,019 12	36,599 84

Original property value		$90,793 03	
Salvage	$37,355 82		
Depreciation	12,418 09		
		49,773 91	
Net Loss		$41,019 12	
Insurance recoverable		36,599 84	
N. C. Ry. uncontrollable loss			$4,419 28

W. H. Maund, Esq.,

Secretary-Treasurer,

Toronto, Ont.

Dear Sir,—I beg to submit my annual report as Chief Engineer and Superintendent of Maintenance, for the fiscal year ended October 31st, 1917.

Mileage.

The mileage now operated is as follows:—

Main Track—		
Owned and maintained by Company	4.92 miles	
Leased from T. & N. O. Ry. Commission:		
Maintained by Company	5.28 "	
Maintained by Commission	5.17 "	
		15.37 miles

Sidings and Spurs—		
Sidings on that part of the line owned by T. & N. O. Ry. Commission:		
Yard Tracks and Sidings	1.65	miles
Private Sidings	1.03	"
	2.68	miles
Sidings on that part of the line owned by N. C. Railway:		
Company Spurs	2.00	miles
Private Spurs	0.11	"
	2.11	miles
Total Track	20.16	"

Equipment.

Rolling stock consists of the following:—

5 Electric Motor Passenger Cars.
1 Combination Switching Locomotive, Express Car and Snow Plow.
2 Freight Cars.

Fire at Car Barns.

On March 4th, 1917, fire destroyed the north end of the car barns. The part of the building destroyed comprised the offices and the car shed. As the fire occurred in the early hours of the morning the cars were in the building and five of them were completely and one partially burned. It was necessary to operate a restricted service until three more cars, which were purchased in St. Louis, were placed in service.

The rebuilding of the car barns was undertaken and will be completed within a short time. The tar and gravel roof was put on by the Maitland Roofing and Supply Company of Toronto, while the plumbing is being installed by F. R. Gibson, of Haileybury. The remainder of the work is being done by our own forces.

Additions to Road and Equipment.

During the year a through siding 605 feet long was constructed for the Riordan Pulp and Paper Company, near their mill on Foster's Spur, Haileybury.

There is a decrease in the amount of rolling stock owned, due to the fire in the car barns, as noted above.

Maintenance.

The property of the company continues to be maintained in good condition. The buildings and equipment suffered considerable damage through fire as mentioned above, but this damage, at the close of the year, had been largely repaired.

Respectfully submitted.

S. B. Clement.

C. E. & S. of M.

TENDERS, RECONSTRUCTION CAR BARNS, NORTH COBALT.

Henderson & Angus	$13,750 00
Colgan & Martin	13,520 00

Upon recommendation C. E. & S. M. Clement, above tenders declined, and work being done by day labor under supervision of Bridge and Building Master, W. J. Oldham.

TENDERS, TAR AND GRAVEL ROOFING, NORTH COBALT CAR BARN—PARTIES ALSO ASKED TO TENDER ON SKYLIGHTS.

——	Est. Roofing.	Skylights.	Total.
	$ c.	$ c.	$ c.
1 Maitland Roofing Co., Toronto	990 00	660 00	1,650 00
2 H. Pudden, Haileybury	960 00	990 00	1,950 00
3 A. Brazeau, Timmins	.....	715 00	715 00x
4. Cochrane Hardware Co., North Bay	.....	825 00	825 00x
5. F. R. Gibson, Haileybury	.....	875 00	875 00x

x These parties tendered on Skylights only.

Contract awarded Maitland Roofing Co., Toronto, $1,650.00 (lowest tender).
Usual agreement containing clauses protecting Commission, entered into under date August 30th, 1917.

TENDERS FOR HEATING AND PLUMBING SYSTEM, CAR BARNS, NORTH COBALT.

1. F. R. Gibson, Haileybury	$1,047 00
2. B. S. Leak, North Bay	1,050 00
3. S. J. Cherry, North Bay	1,134 00

Contract awarded F. R. Gibson, lowest tenderer.
Usual agreement containing clauses protecting Commission, entered into under date August 30th, 1917.

Public School, Englehart, Ontario, one department (5 rooms).

GENERAL BALANCE SHEET

ASSETS.			LIABILITIES.		
Property Owned:			Capital Stock		$530,000 00
Cost of Road as of Oct. 31, 1916	$306,338 12		T. & N. O. Railway—Advance		247,639 50
" for year ended Oct. 31, 1917	1,757 09				
		$308,095 21	Working Liabilities:		
Cost of Equipment as of Oct. 31, 1916	$74,290 98		Accounts Payable	$15,113 97	
" " for year ended Oct. 31, 1917, Cr.	8,705 91	65,585 07	Unclaimed Wages	132 91	
Townsite Property—North Cobalt		240,361 45			15,246 88
Working Assets:			Deferred Credit Items:		
Cash	$7,248 79		War Tax		6 10
Accounts Collectible	296 09				
Balance due on Townsite Sales	7,635 42		Free Surplus:		
Bills Receivable	157 36		Profit and Loss Balance		1,161 29
Balance due from Agents and Conductors	236 29				
Material on hand	14,304 27				
		29,878 22			
Deferred Debit Items:					
Insurance paid in advance	$35 34				
Accounts in Suspense	8,715 16				
		8,750 50			
Other Assets:					
Franchise		141,383 32			
		$794,053 77			$794,053 77

PROFIT AND LOSS.

Townsites	$2,886 41	By Balance—October 31, 1916	$1,415 13
Paid T. and N. O. Ry. Commission	2,000 00	Revenue for year ended October 31, 1917	4,632 57
Balance carried forward	1,161 29		
	$6,047 70		$6,047 70

NIPISSING CENTRAL

Comparative Statement of Earnings and Expenditures by

No.	RECEIPTS	Per cent.	1915 November	Per cent.	1916 November
	I. REVENUE FROM TRANSPORTATION—		$ c.		$ c.
101	Passenger Revenue		6,830 10		6,648 76
102	Baggage Revenue		17 25		37 75
103	Parlor, Sleeping, Dining, and Special Car Revenue		10 00		20 00
104	Mail Revenue				
105	Express Revenue				
106	Milk Revenue		23 55		9 35
107	Freight Revenue		315 71		
108	Switching Revenue		783 96		1,171 37
109	Miscellaneous Transportation Revenue				
	Total		7,980 57		7,887 23
	II. REVENUE FROM OTHER RAILWAY OPERATIONS—				
110	Station and Car Privileges				
111	Parcel Room Receipts				
112	Storage				
113	Demurrage		15 00		17 00
114	Telephone and Telegraph Service				
115	Rent of Tracks and Facilities				128 00
116	Rent of Equipment				
117	Rent of Buildings and other Property		128 00		
118	Power				
119	Miscellaneous				
	Total		143 00		145 00
	TOTAL REVENUE		8,123 57		8,032 23
	EXPENDITURES				
1	Way and Structures	11.6	943 02	14.6	1,173 25
2	Equipment	3.6	294 87	8.1	648 31
3	Power	18.	1,462 16	21.1	1,691 80
4	Conducting Transportation	29.5	2,392 43	29.9	2,406 28
5	Traffic	.3	28 00	.5	44 80
6	General and Miscellaneous	6.8	552 21	7.1	569 52
7	Transportation for Investment—Cr.				
	TOTAL OPERATING EXPENSES	69.8	5,672 69	81.3	6,533 96
	BALANCE		2,450 88		1,498 27
	OTHER INCOME—				
	Ie		55 60		34 42
	Total		2,506 48		1,532 69
	DEDUCTIONS FROM INCOME—				
	Rent for Leased Road		1,205 33		777 37
	Taxes				127 45
	Total.		1,205 33		904 82
	NET RESULT		1,301 15		627 87

RAILWAY

Months, November, 1915, to October, 1917.

Per Cent.	1915 December	Per Cent.	1916 December	Per cent.	1916 January	Per Cent.	1917 January	No.
	$ c.		$ c.		$ c.		$ c.	
.....	7,239 05	.....	7,163 05	.....	6,435 50	.....	6,294 57	101
.....	19 25	.....	35 75	.....	16 00	.....	27 50	102
.....	10 00	.....	65 00	.....	55 00	.....	40 00	103
.....	.....	.....	.....	.....	.....	.....	.....	104
.....	.....	.....	.....	.....	.....	.....	.....	105
.....	28 13	.....	6 99	.....	18 04	.....	5 91	106
.....	465 57	.....	.....	.....	.....	.....	.....	107
.....	791 12	.....	1,126 49	.....	1,382 43	.....	1,051 54	108
.....	.....	.....	.....	.....	.....	.....	.....	109
.....	8,553 12	.....	8,397 28	.....	7,906 97	.....	7,419 52	
.....	44 86	.....	.....	.....	25	.....	125 00	110
.....	.....	.....	.....	.....	.....	.....	.....	111
.....	.....	.....	.....	.....	.....	.....	.....	112
.....	34 00	.....	61 00	.....	17 00	.....	36 00	113
.....	.....	.....	.....	.....	.....	.....	.....	114
.....	.....	.....	35 00	.....	.....	.....	33 00	115
.....	.....	.....	.....	.....	.....	.....	.....	116
.....	35 00	.....	.....	.....	.....	.....	.....	117
.....	.....	.....	.....	.....	.....	.....	.....	118
.....	.....	.....	.....	.....	.....	.....	.....	119
.....	113 83	.....	96 00	.....	17 25	.....	194 00	
.....	8,666 98	.....	8,493 28	.....	7,924 22	.....	7,613 52	
8.9	773 59	11.2	952 82	12.3	973 32	12.6	957 84	1
5.2	445 82	12.6	1,065 43	6.2	488 62	17.2	1,308 99	2
17.8	1,542 57	19.5	1,657 55	23.2	1,840 56	21.1	1,603 51	3
28.8	2,498 70	29.1	2,472 05	27.1	2,150 09	31.	2,364 86	4
.4	33 60	.4	33 60	.6	44 80	.1	11 20	5
7.2	626 22	3.3	280 87	7.3	582 90	7.7	585 89	6
.....	.....	.....	.....	.....	.....	.....	.....	7
68.3	5,920 50	76.1	6,462 32	76.7	6,080 29	89.7	6,832 29	
.....	2,746 48	.....	2,030 96	.....	1,843 93	.....	781 23	
.....	41 85	.....	20 49	.....	55 90	.....	27 85	
.....	2,788 33	.....	2,051 45	.....	1,899 83	.....	809 08	
.....	1,143 82	.....	794 18	.....	1,156 80	.....	780 08	
.....	.....	.....	127 39	.....	.....	.....	127 39	
.....	1,143 82	.....	921 57	.....	1,156 80	.....	907 47	
.....	1,644 51	.....	1,129 88	.....	743 03		Dr. 98 39	

NIPISSING CENTRAL

Comparative Statement of Earnings and Expenditures by

No.	RECEIPTS.	Per cent.	1916 February	Per cent.	1917 February	Per cent.	1916 March
	I. REVENUE FROM TRANSPORTATION—		$ c.		$ c.		$ c.
101	Passenger Revenue		6,084 00		5,761 40		7,379 81
102	Baggage Revenue		22 75		31 25		14 90
103	Parlor, Sleeping, Dining and Special Car Revenue		40 00		50 00		55 00
104	Mail Revenue						
105	Express Revenue						
106	Milk Revenue		5 17		4 71		4 49
107	Freight Revenue						
108	Switching Revenue		1,590 95		753 21		1,464 38
109	Miscellaneous Transportation Revenue						
	Total		7,742 87		6,600 57		8,918 58
	II. REVENUE FROM OTHER RAILWAY OPERATIONS—						
110	Station and Car Privileges						250 00
111	Parcel Room Receipts						
112	Storage						
113	Demurrage		49 00		24 00		176 00
114	Telephone and Telegraph Service						
115	Rent of Tracks and Facilities						
116	Rent of Equipment						
117	Rent of Buildings and other Property						
118	Power						
119	Miscellaneous						
	Total		49 00		24 00		426 00
	TOTAL REVENUE		7,791 87		6,624 57		9,344 58
	EXPENDITURES.						
1	Way and Structures	12.4	969 84	23.7	1,568 99	11.4	1,060 43
2	Equipment	4.9	379 54	12.9	852 62	5.8	543 11
3	Power	23.5	1,827 89	22.5	1,503 28	18.2	1,702 18
4	Conducting Transportation	25.2	1,960 56	34.4	2,277 46	27.6	2,582 89
5	Traffic	.2	13 96	.5	30 40	1.	92 28
6	General and Miscellaneous	7.1	556 37	9.7	639 94	10.2	955 19
7	Transportation for Investment—Cr.						
	TOTAL OPERATING EXPENSES	73.3	5,708 16	103.7	6,872 69	74.2	6,936 08
	BALANCE		2,083 71		Dr. 248 12		2,408 50
	OTHER INCOME—						
	Interest		45 85		21 27		19 35
	Total		2,129 56		Dr. 226 85		2,427 85
	DEDUCTIONS FROM INCOME—						
	Rent for Leased Road		1,155 25		737 58		1,150 88
	Taxes				127 39		
	Total		1,155 25		864 97		1,150 88
	NET RESULT		974 31		Dr.1,091 82		1,276 97

RAILWAY.

months, November, 1915, to October, 1917.—Continued.

Per cent.	1917 March	Per cent.	1916 April	Per cent.	1917 April	Per cent.	1916 May	No.
	$ c.		$ c.		$ c.		$ c.	
.....	5,252 29	.....	8,218 90	.....	5,978 23	.....	8,597 30	101
.....	25 75	.....	46 75	.....	37 25	.....	42 00	102
.....	15 00	.....	10 00	.....	30 00	.....	70 00	103
.....	.....	.....	.....	.....	.....	.....	.....	104
.....	.....	.....	.....	.....	.....	.....	.....	105
.....	5 55	.....	20 49	.....	6 56	.....	9 75	106
.....	.....	.....	.....	.....	.....	.....	.....	107
.....	931 68	.....	1,251 92	.....	1,243 29	.....	852 89	108
.....	.....	.....	.....	.....	.....	.....	.....	109
.....	6,230 27	.....	9,548 06	.....	7,295 33	.....	9,571 94	
.....	.....	.....	.....	.....	125 00	.....	.....	110
.....	.....	.....	.....	.....	.....	.....	.....	111
.....	.....	.....	.....	.....	.....	.....	.....	112
.....	71 75	.....	48 00	.....	151 00	.....	68 00	113
.....	.....	.....	.....	.....	.....	.....	.....	114
.....	.....	.....	.....	.....	.....	.....	.....	115
.....	.....	.....	.....	.....	.....	.....	.....	116
.....	.....	.....	.....	.....	.....	.....	.....	117
.....	.....	.....	.....	.....	.....	.....	.....	118
.....	.....	.....	.....	.....	.....	.....	.....	119
.....	71 75	.....	48 00	.....	276 00	.....	68 00	
.....	6,302 02	.....	9,596 06	.....	7,571 33	.....	9,639 94	
32.	2,017 69	7.5	720 79	19.2	1,457 06	9.8	945 86	1
11.2	701 45	3.5	338 19	19.7	1,490 24	4.5	432 15	2
20.6	1,298 51	15.	1,436 75	15.4	1,164 35	15.8	1,522 55	3
33.6	2,117 40	28.4	2,727 04	23.3	1,763 16	24.1	2,323 31	4
.....	.....	.6	53 08	.4	33 60	.6	57 63	5
10.9	688 16	10.4	1,002 68	10.5	793 93	9.3	898 99	6
.....	.....	.....	.....	.....	.....	.....	.....	7
108.3	6,823 21	65.4	6,278 53	88.5	6,702 34	64.1	6,180 49	
.....	Dr. 521 19	.....	3,317 53	.....	868 99	.....	3,459 45	
.....	20 04	.....	.....	.....	19 53	.....	79 60	
.....	Dr. 501 15	.....	3,317 53	.....	888 52	.....	3,539 05	
.....	719 65	.....	1,179 04	.....	770 70	.....	1,144 52	
.....	127 39	.....	.....	.....	127 39	.....	.....	
.....	847 04	.....	1,179 04	.....	898 09	.....	1,144 52	
.....	Dr. 1,348 19	.....	2,138 49	.....	Dr. 9 57	.....	2,394 53	

NIPISSING CENTRAL

Comparative Statement of Earnings and Expenditures by

No.	RECEIPTS	Per cent.	1917 May	Per cent.	1916 June	Per cent.	1917 June
	I. REVENUE FROM TRANSPORTATION—		$ c.		$ c.		$ c.
101	Passenger Revenue		6,055 23		8,959 55		6,321 98
102	Baggage Revenue		45 00		58 75		62 50
103	Parlor, Sleeping, Dining, and Special Car Revenue		60 00		40 00		60 00
104	Mail Revenue						
105	Express Revenue						
106	Milk Revenue		6 67		5 64		3 58
107	Freight Revenue						
108	Switching Revenue		870 62		886 60		1,080 68
109	Miscellaneous Transportation Revenue						
	Total		7,037 52		9,950 54		7,528 74
	II. REVENUE FROM OTHER RAILWAY OPERATIONS—						
110	Station and Car Privileges						125 00
111	Parcel Room Receipts						
112	Storage						
113	Demurrage		145 00		16 00		72 00
114	Telephone and Telegraph Service						
115	Rent of Tracks and Facilities						
116	Rent of Equipment						
117	Rent of Buildings and other Property						
118	Power						
119	Miscellaneous						
	Total		145 00		16 00		197 00
	TOTAL REVENUE		7,182 52		9,966 54		7,725 74
	EXPENDITURES						
1	Way and Structures	14.7	1,054 19	9.4	937 55	13.2	1,021 32
2	Equipment	20.1	1,446 49	4.6	460 72	12.5	963 67
3	Power	15.8	1,136 13	14.4	1,435 80	15.	1,156 10
4	Conducting Transportation	29.6	2,125 39	23.3	2,323 17	26.6	2,053 57
5	Traffic	.7	50 40	.5	51 73		
6	General and Miscellaneous	9.6	685 78	11.6	1,155 89	7.2	561 05
7	Transportation for Investment—Cr.						
	TOTAL OPERATING EXPENSES	90.5	6,498 38	63.8	6,364 86	74.5	5,755 71
	BALANCE		684 14		3,601 68		1,970 03
	OTHER INCOME—						
	Interest		15 64				10 76
	Total		699 78		3,601 68		1,980 79
	DEDUCTIONS FROM INCOME—						
	Rent for Leased Road		751 09		1,150 58		764 77
	Taxes		127 39				127 39
	Total		878 48		1,150 58		892 16
	NET RESULT		Dr. 178 70		2,451 10		1,088 63

RAILWAY.

Months, November, 1915, to October, 1917.—Continued.

Per cent.	1916 July	Per cent.	1917 July	Per cent.	1916 August	Per cent.	1917 August	No.
	$ c.		$ c.		$ c.		$ c.	
.....	9,374 25	.....	7,368 38	.....	9,538 20	.....	7,378 35	101
.....	81 75	.....	78 75	.....	92 50	.....	47 50	102
.....	30 00	.....	40 00	.....	135 00	.....	37 50	103
.....	.....	.....	.....	.....	.....	.....	.....	104
.....	.....	.....	.....	.....	.....	.....	.....	105
.....	4 60	.....	9 61	.....	6 05	.....	6 71	106
.....	.....	.....	.....	.....	.....	.....	.....	107
.....	896 96	.....	1,786 85	.....	895 26	.....	1,136 78	108
.....	.....	.....	.....	.....	.....	.....	.....	109
.....	10,387 56	.....	9,283 59	.....	10,667 01	.....	8,606 84	
.....	125 00	.....	.....	.....	.....	.....	.....	110
.....	.....	.....	.....	.....	.....	.....	.....	111
.....	.....	.....	.....	.....	.....	.....	.....	112
.....	45 00	.....	137 00	.....	94 50	.....	310 00	113
.....	.....	.....	.....	.....	.....	.....	.....	114
.....	.....	.....	.....	.....	.....	.....	.....	115
.....	.....	.....	.....	.....	.....	.....	.....	116
.....	.....	.....	.....	.....	.....	.....	.....	117
.....	.....	.....	.....	.....	.....	.....	.....	118
.....	.....	.....	.....	.....	.....	.....	.....	119
.....	170 00	.....	137 00	.....	94 50	.....	310 00	
.....	10,557 56	.....	9,420 59	.....	10,761 51	.....	8,916 84	
10.5	1,113 46	14.9	1,401 84	7.9	856 81	14.	1,251 50	1
3.2	333 75	8.1	757 90	3.6	377 55	11.	977 02	2
13.9	1,470 25	14.3	1,348 17	14.	1,507 70	17.2	1,536 59	3
22.5	2,371 91	23.5	2,218 16	22.5	2,421 73	24.9	2,215 12	4
.4	47 48	.6	56 00	.1	13 88	.4	33 60	5
8.7	914 15	7.1	671 39	10.4	1,127 51	9.7	867 63	6
.....	.....	.....	.....	.....	.....	.....	.....	7
59.2	6,251 00	68.5	6,453 46	58.5	6,305 18	77.2	6,881 46	
.....	4,306 56	.....	2,967 13	.....	4,456 33	.....	2,035 38	
.....	57 55	.....	19 47	.....	42 25	.....	25 34	
.....	4,364 11	.....	2,986 60	.....	4,498 58	.....	2,060 72	
.....	1,176 35	.....	864 27	.....	1,187 50	.....	786 52	
.....	.....	.....	127 39	.....	.....	.....	127 39	
.....	1,176 35	.....	991 66	.....	1,187 50	.....	913 91	
.....	3,187 76	.....	1,994 94	.....	3,311 08	.....	1,146 81	

NIPISSING CENTRAL

Comparative Statement of Earnings and Expenditures by

No.	RECEIPTS	Per cent.	1916 September	Per cent.	1917 September	Per cent.	1916 October
	I. REVENUE FROM TRANSPORTATION—		$ c.		$ c.		$ c.
101	Passenger Revenue		8,617 07		7,315 14		6,981 71
102	Baggage Revenue		49 00		32 25		33 75
103	Parlor, Sleeping, Dining and Special Car Revenue		35 00		60 00		20 00
104	Mail Revenue						
105	Express Revenue						
106	Milk Revenue		7 24		5 57		24 02
107	Freight Revenue						
108	Switching Revenue		1,019 30		1,124 44		923 03
109	Miscellaneous Transportation Revenue						
	Total		9,727 61		8,537 40		7,982 51
	II. REVENUE FROM OTHER RAILWAY OPERATIONS—						
110	Station and Car Privileges		125 00		125 00		
111	Parcel Room Receipts						
112	Storage						
113	Demurrage		86 00		124 00		71 00
114	Telephone and Telegraph Service						
115	Rent of Tracks and Facilities						33 00
116	Rent of Equipment						
117	Rent of Buildings and other Property						
118	Power						
119	Miscellaneous						
	Total		211 00		249 00		104 00
	TOTAL REVENUE		9,938 61		8,786 40		8,086 51
	EXPENDITURES						
1	Way and Structures	9.1	907 34	19.9	1,748 58	12.9	1,046 73
2	Equipment	4.1	406 88	11.4	1,001 29	6.1	496 91
3	Power	16.9	1,683 88	17.5	1,541 10	13.9	1,123 78
4	Conducting Transportation	22.7	2,250 45	27.1	2,377 41	34.9	2,819 27
5	Traffic	.4	41 88			.7	53 08
6	General and Miscellaneous	9.1	900 66	8.7	764 29	16.2	1,305 99
7	Transportation for Investment—Cr.						
	TOTAL OPERATING EXPENSES	62.3	6,191 09	84.6	7,432 67	84.7	6,845 76
	BALANCE		3,747 52		1,353 73		1,240 75
	OTHER INCOME—						
	Interest		45 67		20 62		56 33
	Total		3,793 19		1,374 35		1,297 08
	DEDUCTIONS FROM INCOME—						
	Rent for Leased Road		1,170 46		768 49		1,145 29
	Taxes				127 39		
	Total		1,170 46		895 88		1,145 29
	NET RESULT		2,622 73		478 47		151 79

RAILWAY.

Months, November, 1915, to October, 1917—Continued.

Per cent.	1917 October	Per cent.	1916 Total	Per cent.	1917 Total	Increase	Decrease	No.
	$ c.		$ c.		$ c.	$ c.	$ c.	
.....	7,309 35	.....	94,255 44	.....	78,846 73	.....	15,408 71	101
.....	33 75	.....	494 65	.....	495 00	35	.....	102
.....	45 00	.....	510 00	.....	522 50	12 50	.....	103
.....	.....	.....	.....	.....	.....	.....	.....	104
.....	.....	.....	.....	.....	.....	.....	.....	105
.....	6 28	.....	157 17	.....	77 49	.....	79 68	106
.....	.....	.....	781 28	.....	.....	.....	781 28	107
.....	1,113 06	.....	12,738 80	.....	13,390 01	651 21	.....	108
.....	.....	.....	.....	.....	.....	.....	.....	109
.....	8,507 44	.....	108,937 34	.....	93,331 73	.....	15,605 61	
.....	.....	.....	545 11	.....	500 00	.....	45 11	110
.....	.....	.....	.....	.....	.....	.....	.....	111
.....	.....	.....	.....	.....	.....	.....	.....	112
.....	143 00	.....	719 50	.....	1,291 75	572 25	.....	113
.....	.....	.....	.....	.....	.....	.....	.....	114
.....	.....	.....	33 00	.....	196 00	163 00	.....	115
.....	.....	.....	.....	.....	.....	.....	.....	116
.....	128 00	.....	163 00	.....	128 00	.....	35 00	117
.....	.....	.....	.....	.....	.....	.....	.....	118
.....	.....	.....	.....	.....	.....	.....	.....	119
.....	271 00	.....	1,460 61	.....	2,115 75	655 14	.....	
.....	8,778 44	.....	110,397 95	.....	95,447 48	.....	14,950 47	
12.6	1,112 51	10.2	11,248 74	16.5	15,717 59	4,468 85	.....	1
14.5	1,270 72	4.5	4,998 11	13.1	12,484 13	7,486 02	.....	2
21.	1,844 37	16.8	18,556 07	18.3	17,481 46	.....	1,074 61	3
24.8	2,177 23	26.1	28,821 55	27.8	26,568 09	.....	2,253 46	4
.....	.....	.5	531 40	.3	293 60	.....	237 80	5
6.9	604 41	9.6	10,578 76	8.1	7,712 86	.....	2,865 90	6
.....	.....	.....	.....	.....	.....	.....	.....	7
79.8	7,009 24	67.7	74,734 63	84.1	80,257 73	5,523 10	.....	
.....	1,769 20	.....	35,663 32		15,189 75	.....	20,473 57	
.....	33 16	.....	499 95	.....	268 59	.....	231 36	
.....	1,802 36	.....	36,163 27	.....	15,458 34	.....	20,704 93	
.....	782 33	.....	13,965 82	.....	9,297 03	.....	4,668 79	
.....	127 39	.....	.....	.....	1,528 74	1,528 74	.....	
.....	909 72	.....	13,965 82	.....	10,825 77	.....	3,140 05	
.....	892 64	.....	22,197 45	.....	4,632 57	.....	17,564 88	

NIPISSING CENTRAL

Comparative Statement of Earnings and Expenditures by

No.	Maintenance of Way and Structures.	1915 November	1916 November	1915 December	1916 December
		$ c.	$ c.	$ c.	$ c.
1	Superintendence of way and structures	16 00	17 00	16 00	17 00
2	Ballast	14 00	14 00	14 00	14 00
3	Ties	231 67	300 47	39 67	49 27
4	Rails	51 33	51 33	51 33	51 33
5	Rail fastenings and joints	9 37	4 67	4 67	18 67
6	Special work	4 67	329 43	4 67	73 44
7	Underground construction				
8	Track and roadway labor	352 49	116 67	178 60	262 62
9	Miscellaneous track and roadway expenses	6 40	102 58	3 37	13 73
10	Paving	25 57			
11	Cleaning and sanding track	15 48	5 52	2 58	2 84
12	Removal of snow and ice	64 38	76 17	321 76	339 14
13	Tunnels and subways				
14	Elevated structures and foundations				
15	Bridges, trestles and culverts				
16	Crossings, fences and signs	25 89		1 94	11 78
17	Signal and interlocking apparatus				
18	Telephone and telegraph lines	25 00	50 64	25 00	21 00
19	Miscellaneous way expenses				
20	Poles and fixtures	49 00	27 00	52 00	21 00
21	Underground conduits				
22	Distribution system	49 00	70 62	58 00	57 00
23	Miscellaneous electric line expenses				
24	Buildings, fixtures and grounds	2 77	7 15		
25	Depreciation of way and structures				
26	Other operations—Dr.				
27	Other operations—Cr.				
28	Equalization—way and structures				
	Total	943 02	1,173 25	773 59	952 82

No.	Maintenance of Equipment.				
29	Superintendence of equipment	20 50	17 00	16 00	17 00
30	Passenger and combination cars	209 54	450 54	373 86	785 63
31	Freight, express and mail cars				05
32	Service equipment				133 77
33	Electric equipment of cars	51 51	171 80	42 89	119 73
34	Locomotives				
35	Floating equipment				
36	Shop equipment		15		
37	Shop expenses	13 32	8 82	13 07	9 25
38	Vehicles and horses				
39	Miscellaneous equipment expenses				
40	Depreciation of equipment				
41	Equipment retired				
42	Other operations—Dr.				
43	Other operations—Cr.				
44	Equalization—equipment				
	Total	294 87	648 31	445 82	1,065 43

RAILWAY.

Months, November, 1915, to October, 1917—Continued.

1916 January	1917 January	1916 February	1917 February	1916 March	1917 March	No.
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	
17 00	17 00	36 48	23 25	36 44	17 00	1
134 19	14 00	14 00	14 00	14 00	14 00	2
39 67	39 67	39 67	53 43	39 67	39 67	3
51 33	51 33	51 33	59 09	51 33	298 83	4
4 67	4 67	4 67	4 67	4 67	4 67	5
4 67	4 67	4 67	780 93	4 67	40 54	6
.....	.....	.....	.....	.....	.....	7
147 80	295 45	148 94	163 75	181 83	167 34	8
3 37	2 97	3 13	12 89	3 13	15 17	9
.....	.....	.....	.....	.....	.....	10
.....	.....	.....	.....	.....	.....	11
478 68	377 17	600 20	420 78	642 59	575 92	12
.....	.....	.....	.....	.....	.....	13
.....	.....	.....	.....	.....	.....	14
.....	.....	.....	.....	.....	438 10	15
.....	30 58	.....	.....	.....	.....	16
.....	.....	.....	.....	.....	.....	17
28 50	12 00	18 75	12 00	10 00	8 51	18
.....	.....	.....	.....	.....	.....	19
25 85	12 00	24 00	12 00	21 25	6 00	20
.....	.....	.....	.....	.....	.....	21
37 34	64 88	24 00	12 00	50 50	51 81	22
.....	.....	.....	.....	.....	.....	23
25	31 45	.....	20	35	340 13	24
.....	.....	.....	.....	.....	.....	25
.....	.....	.....	.....	.....	.....	26
.....	.....	.....	.....	.....	.....	27
.....	.....	.....	.....	.....	.....	28
973 32	957 84	969 84	1,568 99	1,060 43	2,017 69	
17 00	21 50	22 60	23 25	22 55	17 00	29
351 06	573 94	221 89	677 54	319 37	470 64	30
.....	6 00	.....	.....	.....	30 48	31
.....	39 33	.....	27 69	.....	5 12	32
110 70	190 81	131 63	116 01	193 79	141 83	33
.....	.....	.....	.....	.....	.....	34
.....	.....	.....	.....	.....	.....	35
.....	.....	.....	.....	.....	.....	36
9 86	477 41	3 42	8 13	7 40	36 38	37
.....	.....	.....	.....	.....	.....	38
.....	.....	.....	.....	.....	.....	39
.....	.....	.....	.....	.....	.....	40
.....	.....	.....	.....	.....	.....	41
.....	.....	.....	.....	.....	.....	42
.....	.....	.....	.....	.....	.....	43
.....	.....	.....	.....	.....	.....	44
488 62	1,308 99	379 54	852 62	543 11	701 45	

NIPISSING CENTRAL

Comparative Statement of Earnings and Expenditures by

No.	Maintenance of Way and Structures.	1916 April	1917 April	1916 May	1917 May
		$ c.	$ c.	$ c.	$ c.
1	Superintendence of way and structures	36 44	17 00	36 44	17 00
2	Ballast	14 00	14 00	14 00	14 00
3	Ties	39 67	39 67	39 67	85 39
4	Rails	51 33	62 97	51 33	108 27
5	Rail fastenings and joints	4 67	14 48	4 67	4 67
6	Special work	4 67	36 99	95 42	4 67
7	Underground construction	.....	.....	.....	.....
8	Track and roadway labor	367 67	357 35	498 51	592 78
9	Miscellaneous track and roadway expenses	4 79	17 26	3 13	14 96
10	Paving	.....	.....	.....	.....
11	Cleaning and sanding track	.....	30	16 44	9 00
12	Removal of snow and ice	88 81	195 41	1 66	.....
13	Tunnels and subways	.....	.....	.....	.....
14	Elevated structures and foundations	.....	.....	.....	.....
15	Bridges, trestles and culverts	.....	162 65	.....	.....
16	Crossings, fences and signs	2 58	.....	.....	3 24
17	Signal and interlocking apparatus	.....	.....	.....	.....
18	Telephone and telegraph lines	9 00	12 02	25 75	12 00
19	Miscellaneous way expenses	.....	.....	.....	.....
20	Poles and fixtures	15 00	12 00	72 75	19 20
21	Underground conduits	.....	.....	.....	.....
22	Distribution system	18 00	31 25	74 13	24 00
23	Miscellaneous electric line expenses	.....	.....	.....	.....
24	Buildings, fixtures and grounds	64 16	483 71	11 96	145 01
25	Depreciation of way and structures	.....	.....	.....	.....
26	Other operations—Dr.	.....	.....	.....	.....
27	Other operations—Cr.	.....	.....	.....	.....
28	Equalization—way and structures	.....	.....	.....	.....
	Total	720 79	1,457 06	945 86	1,054 19
No.	Maintenance of Equipment.				
29	Superintendence of equipment	22 55	17 00	22 55	17 00
30	Passenger and combination cars	161 42	673 05	267 95	335 56
31	Freight, express and mail cars	.....	40	.....	.....
32	Service equipment	.....	.....	.....	.....
33	Electric equipment of cars	148 24	772 27	124 81	821 34
34	Locomotives	.....	.....	.....	.....
35	Floating equipment	.....	.....	.....	.....
36	Shop equipment	.....	.....	.....	.....
37	Shop expenses	5 98	27 52	16 84	272 59
38	Vehicles and horses	.....	.....	.....	.....
39	Miscellaneous equipment expenses	.....	.....	.....	.....
40	Depreciation of equipment	.....	.....	.....	.....
41	Equipment retired	.....	.....	.....	.....
42	Other operations—Dr.	.....	.....	.....	.....
43	Other operations—Cr.	.....	.....	.....	.....
44	Equalization—equipment	.....	.....	.....	.....
	Total	338 19	1,490 24	432 15	1,446 49

RAILWAY.

Months, November, 1915, to October, 1917—Continued.

1916 June	1917 June	1916 July	1917 July	1916 August	1917 August	No.
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	
36 44	17 00	33 69	21 50	40 94	17 00	1
14 00	14 00	14 00	14 00	14 00	14 00	2
39 67	39 67	39 67	185 00	63 67	313 27	3
51 33	51 33	51 33	51 33	51 33	51 33	4
4 67	45 15	4 67	4 67	4 67	4 67	5
4 67	4 67	4 67	529 04	4 67	4 67	6
						7
487 67	712 81	654 61	180 12	478 29	654 05	8
11 58	16 59	33 96	7 11	7 26	9 87	9
						10
27 20	27 17	42 92	10 99	30 17	8 81	11
						12
						13
						14
				36 00		15
			20 43	3 50		16
						17
27 83	16 76	33 25	6 00	14 68	16 50	18
						19
36 50	33 50	27 50	14 00	13 00	41 74	20
						21
195 99	27 84	110 58	98 58	26 99	115 25	22
						23
	14 83	62 61	259 07	67 64	34	24
						25
						26
						27
						28
937 55	1,021 32	1,113 46	1,401 84	856 81	1,251 50	
22 55	17 00	22 55	132 96	22 55	17 00	29
242 47	248 34	185 35	82 00	205 23	68 56	30
						31
						32
188 60	671 99	109 97	536 90	128 23	123 69	33
						34
						35
						36
7 10	26 34	15 88	6 04	21 54	5 33	37
						38
						39
						40
					762 44	41
						42
						43
						44
460 72	963 67	333 75	757 90	377 55	977 02	

NIPISSING CENTRAL

Comparative Statement of Earnings and Expenditures by

No.	Maintenance of Way and Structures.	1916 September	1917 September	1916 October
		$ c.	$ c.	$ c.
1	Superintendence of way and structures	36 44	17 00	36 44
2	Ballast	14 00	14 00	14 00
3	Ties	113 59	39 67	252 47
4	Rails	51 33	77 04	51 33
5	Rail fastenings and joints	4 67	4 67	4 67
6	Special work	4 67	4 67	4 67
7	Underground construction			
8	Track and roadway labor	595 73	1,370 56	482 02
9	Miscellaneous track and roadway expenses	2 81	32 93	5 89
10	Paving			31 85
11	Cleaning and sanding track	18 32	6 96	13 48
12	Removal of snow and ice			24 76
13	Tunnels and subways			
14	Elevated structures and foundations			
15	Bridges, trestles and culverts			
16	Crossings, fences and signs			7 39
17	Signal and interlocking apparatus			
18	Telephone and telegraph lines	13 00	13 25	30 58
19	Miscellaneous way expenses			
20	Poles and fixtures	13 00	16 00	22 00
21	Underground conduits			
22	Distribution system	39 00	123 36	59 90
23	Miscellaneous electric line expenses			
24	Buildings, fixtures and grounds	78	28 47	5 28
25	Depreciation of way and structures			
26	Other operations—Dr.			
27	Other operations—Cr.			
28	Equalization—way and structures			
	Total	907 34	1,748 58	1,046 73
	Maintenance of Equipment.			
29	Superintendence of equipment	22 55	17 00	22 55
30	Passenger and combination cars	76 67	64 82	336 43
31	Freight, express and mail cars	69 14		28 36
32	Service equipment			
33	Electric equipment of cars	233 16	Cr. 1,113 13	104 55
34	Locomotives			
35	Floating equipment			
36	Shop equipment			
37	Shop expenses	5 36	9 97	5 02
38	Vehicles and horses			
39	Miscellaneous equipment expenses			
40	Depreciation of equipment			
41	Equipment retired		2,022 63	
42	Other operations—Dr.			
43	Other operations—Cr.			
44	Equalization—equipment			
	Total	406 88	1,001 29	496 91

RAILWAY.

Months, November, 1915, to October, 1917—Continued.

	1917 October	1916 Total	1917 Total	Increase	Decrease	No.
	$ c.	$ c.	$ c.	$ c.	$ c.	
	17 00	378 75	214 75	.....	164 00	1
	14 00	288 19	168 00	.....	120 19	2
	86 87	978 76	1,272 05	293 29	.....	3
	51 33	615 96	965 51	349 55	.....	4
	4 67	60 74	120 33	59 59	.....	5
Cr.	16 49	146 79	1,797 23	1,650 44	.....	6
	.....	.....	.....	.....	.....	7
	678 97	4,574 16	5,552 47	978 31	.....	8
	73 70	88 82	319 76	230 94	.....	9
	.....	57 42	.....	.....	57 42	10
	8 71	166 59	80 30	.....	86 29	11
	7 92	2,222 84	1,992 51	.....	230 33	12
	.....	.....	.....	.....	.....	13
	.....	.....	.....	.....	.....	14
	.....	36 00	600 75	564 75	.....	15
	4 40	41 30	70 43	29 13	.....	16
	.....	.....	.....	.....	.....	17
	21 80	261 34	202 48	.....	58 86	18
	.....	.....	.....	.....	.....	19
	23 50	371 85	237 94	.....	133 91	20
	.....	.....	.....	.....	.....	21
	27 25	743 43	703 84	.....	39 59	22
	.....	.....	.....	.....	.....	23
	108 88	215 80	1,419 24	1,203 44	.....	24
	.....	.....	.....	.....	.....	25
	.....	.....	.....	.....	.....	26
	.....	.....	.....	.....	.....	27
	.....	.....	.....	.....	.....	28
	1,112 51	11,248 74	15,717 59	4,468 85	.....	
	17 00	256 50	330 71	74 21	.....	29
	252 33	2,951 24	4,682 95	1,731 71	.....	30
	.....	97 50	36 93	.....	60 57	31
	.....	.....	205 91	205 91	.....	32
	219 89	1,568 08	2,773 13	1,205 05	.....	33
	.....	.....	.....	.....	.....	34
	.....	.....	.....	.....	.....	35
	.....	.....	15	15	.....	36
	19 07	124 79	906 85	782 06	.....	37
	.....	.....	.....	.....	.....	38
	.....	.....	.....	.....	.....	39
	.....	.....	.....	.....	.....	40
	762 43	.....	3,547 50	3,547 50	.....	41
	.....	.....	.....	.....	.....	42
	.....	.....	.....	.....	.....	43
	.....	.....	.....	.....	.....	44
	1,270 72	4,998 11	12,484 13	7,486 02	.....	

NIPISSING CENTRAL

Comparative Statement of Earnings and Expenditures by

No.	Power.	1915 November	1916 November	1915 December	1916 December
		$ c.	$ c.	$ c.	$ c.
45	Superintendence of power	16 00	17 00	16 00	17 00
46	Power plant buildings, fixtures and grounds	.....	.....	.....	27 31
47	Power plant equipment	.....	.....	.....	.....
48	Substation equipment	.....	133 50	.....	.....
49	Transmission system	25 00	10 00	25 00	.....
50	Depreciation of power plant buildings and equipment	.....	.....	.....	.....
51	Equalization—power	.....	.....	.....	.....
52	Power plant employees	.....	.....	.....	.....
53	Fuel for power	.....	.....	.....	.....
54	Water for power	.....	.....	.....	.....
55	Lubricants for power	.....	.....	.....	.....
56	Miscellaneous power plant supplies and expenses	.....	.....	.....	.....
57	Substation employees	160 00	160 00	160 00	160 00
58	Substation supplies and expenses	3 41	5 55	7 32	8 74
59	Power purchased	1,257 75	1,365 75	1,334 25	1,444 50
60	Power exchanged—balance	.....	.....	.....	.....
61	Power transferred—credit	.....	.....	.....	.....
62	Other operations—credit	.....	.....	.....	.....
	Total	1,462 16	1,691 80	1,542 57	1,657 55
	Conducting Transportation.				
63	Superintendence of transportation	112 00	119 00	112 00	119 00
64	Passenger conductors, motormen and trainmen	1,435 76	1,552 15	1,482 48	1,601 75
65	Freight and express conductors, motormen and trainmen	320 06	305 73	288 40	311 17
66	Miscellaneous car service employees	6 46	18 66	.....	9 66
67	Miscellaneous car service expenses	300 83	129 03	462 16	135 17
68	Station employees	.....	36 25	.....	72 50
69	Station expenses	7 32	13 63	90	24 43
70	Carhouse employees	210 00	228 25	150 00	198 37
71	Carhouse expenses	.....	.....	.....	.....
72	Operation of signal and interlocking apparatus	.....	.....	.....	.....
73	Operation of telephone and telegraph lines	.....	.....	1 40	.....
74	Operation of floating equipment	.....	.....	.....	.....
75	Operation of steam locomotives	.....	.....	.....	.....
76	Freight and express collection and delivery	.....	.....	.....	.....
77	Loss and damage	.....	.....	.....	.....
78	Other transportation expenses	.....	3 58	1 36	.....
	Total	2,392 43	2,406 28	2,498 70	2,472 05
	Traffic.				
79	Superintendence and solicitation	.....	.....	.....	.....
80	Advertising	28 00	44 80	33 60	33 60
81	Parks, resorts and attractions	.....	.....	.....	.....
82	Miscellaneous traffic expenses	.....	.....	.....	.....
	Total	28 00	44 80	33 60	33 60

RAILWAY.

Months, November, 1915, to October, 1917—Continued.

1916 January	1917 January	1916 February	1917 February	1916 March	1917 March	No.
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	
17 00	17 00	22 60	17.00	22 55	17 00	45
.....	.....	.....	.....	.....	.....	46
.....	.....	.....	.....	.....	.....	47
79 70	.....	18 75	48	.....	.....	48
25 00	.....	41 25	.....	.....	.....	49
.....	.....	.....	.....	.....	.....	50
.....	.....	.....	.....	.....	.....	51
.....	.....	.....	.....	.....	.....	52
.....	.....	.....	.....	.....	.....	53
.....	.....	.....	.....	.....	.....	54
.....	.....	.....	.....	.....	.....	55
.....	.....	.....	.....	.....	23	56
168 40	160 00	160 00	160 00	160 00	160 00	57
2 46	2 26	1 29	55	3 13	3 03	58
1,548 00	1,424 25	1,584 00	1,325 25	1,516 50	1,118 25	59
.....	.....	.....	.....	.....	.....	60
.....	.....	.....	.....	.....	.....	61
.....	.....	.....	.....	.....	.....	62
1,840 56	1,603 51	1,827 89	1,503 28	1,702 18	1,298 51	
119 00	119 00	132 96	131 50	132 88	119 00	63
1,525 18	1,648 50	1,501 64	1,490 89	1,590 59	1,077 50	64
293 84	291 49	269 68	286 03	368 10	340 40	65
6 84	.....	5 70	.....	6 84	.....	66
29 33	147 54	Cr. 154 87	110 93	277 91	210 45	67
.....	.....	.....	72 50	.....	.....	68
9 82	7 82	5 45	33 15	6 57	3 20	69
166 08	150 51	200 00	152 46	200 00	154 40	70
.....	.....	.....	.....	.....	.....	71
.....	.....	.....	.....	.....	.....	72
.....	.....	.....	.....	.....	.....	73
.....	.....	.....	.....	.....	.....	74
.....	.....	.....	.....	.....	.....	75
.....	.....	.....	.....	.....	.....	76
.....	.....	.....	.....	.....	.....	77
.....	.....	.....	.....	.....	212 45	78
2,150 09	2,364 86	1,960 56	2,277 46	2,582 89	2,117 40	
.....	.....	13 96	.....	13 88	.....	79
44 80	11 20	.....	30 40	78 40	.....	80
.....	.....	.....	.....	.....	.....	81
.....	.....	.....	.....	.....	.....	82
44 80	11 20	13 96	30 40	92 28	.....	

NIPISSING CENTRAL

Comparative Statement of Earnings and Expenditures by

No.	Power.	1916 April	1917 April	1916 May	1917 May
		$ c.	$ c.	$ c.	$ c.
45	Superintendence of power	22 55	17 00	22 55	17 00
46	Power plant buildings, fixtures and grounds				
47	Power plant equipment				
48	Substation equipment			30 00	
49	Transmission system		2 02	34 00	8 28
50	Depreciation of power plant buildings and equipment				
51	Equalization—power				
52	Power plant employees				
53	Fuel for power				
54	Water for power				
55	Lubricants for power				
56	Miscellaneous power plant supplies and expenses				
57	Substation employees	160 00	155 00	160 00	168 00
58	Substation supplies and expenses	95	7 83	25	9 85
59	Power purchased	1,253 25	982 50	1,275 75	933 00
60	Power exchanged—balance				
61	Power transferred—credit				
62	Other operations—credit				
	Total	1,436 75	1,164 35	1,522 55	1,136 13
	Conducting Transportation.				
63	Superintendence of transportation	132 88	119 00	132 88	119 00
64	Passenger conductors, motormen and trainmen	1,551 92	949 27	1,679 07	1,170 02
65	Freight and express conductors, motormen and trainmen	268 10	360 27	265 90	304 74
66	Miscellaneous car service employees	6 46		6 56	5 04
67	Miscellaneous car service expenses	369 24	115 75	65 90	395 14
68	Station employees		36 25		
69	Station expenses	4 68	11 05	Cr. 55	Cr. 55
70	Carhouse employees	189 67	169 80	173 55	132 00
71	Carhouse expenses	204 09			
72	Operation of signal and interlocking apparatus				
73	Operation of telephone and telegraph lines				
74	Operation of floating equipment				
75	Operation of steam locomotives				
76	Freight and express collection and delivery				
77	Loss and damage				
78	Other transportation expenses		1 77		
	Total	2,727 04	1,763 16	2,323 31	2,125 39
	Traffic.				
79	Superintendence and solicitation	13 88		13 88	
80	Advertising	39 20	33 60	43 75	50 40
81	Parks, resorts and attractions				
82	Miscellaneous traffic expenses				
	Total	53 08	33 60	57 63	50 40

RAILWAY.

Months, November, 1915, to October, 1917—Continued.

1916 June	1917 June	1916 July	1917 July	1916 August	1917 August	No.
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	
22 55	17 00	22 55	17 00	22 55	17 00	45
						46
						47
22 50		47	13 57			48
	7 00	14 90	1 50	13 00	59 00	49
						50
						51
						52
						53
						54
						55
						56
160 00	158 00	160 00	168 00	160 00	204 74	57
	1 35	1 08		40	6 05	58
1,230 75	972 75	1,271 25	1,148 10	1,311 75	1,249 80	59
						60
						61
						62
1,435 80	1,156 10	1,470 25	1,348 17	1,507 70	1,536 59	
132 88	119 00	132 88	102 00	132 88	119 00	63
1,646 44	1,362 86	1,649 71	1,568 18	1,621 93	1,562 69	64
263 00	241 03	263 40	282 33	267 50	264 94	65
	3 18	7 20	1 59	6 30	1 60	66
3 33	50 95	106 17	98 54	29 44	49 48	67
	72 50		36 25		36 25	68
18 17	31 57	90	6 92	120 92	101 16	69
259 35	160 74	211 65	122 35	210 00	80 00	70
						71
						72
						73
						74
						75
						76
						77
	11 74			32 76		78
2,323 17	2,053 57	2,371 91	2,218 16	2,421 73	2,215 12	
18 13		13 88		13 88		79
33 60		33 60	56 00		33 60	80
						81
						82
51 73		47 48	56 00	13 88	33 60	

NIPISSING CENTRAL

Comparative Statement of Earnings and Expenditures by

No.	Power.	1916 September	1917 September	1916 October
		$ c.	$ c.	$ c.
45	Superintendence of power	22 55	17 00	22 55
46	Power plant buildings, fixtures and grounds	.....	.....	.....
47	Power plant equipment	60 60	2 25	.....
48	Substation equipment	157 27	.....	Cr. 379 00
49	Transmission system	13 00	3 50	5 40
50	Depreciation of power plant buildings and equipment	.....	.....	.....
51	Equalization—power	.....	.....	.....
52	Power plant employees	.....	.....	.....
53	Fuel for power	.....	.....	.....
54	Water for power	.....	.....	.....
55	Lubricants for power	.....	.....	.....
56	Miscellaneous power plant supplies and expenses	.....	.....	.....
57	Substation employees	160 00	233 15	217 60
58	Substation supplies and expenses	1 46	.....	1 73
59	Power purchased	1,269 00	1,285 20	1,255 50
60	Power exchanged—balance	.....	.....	.....
61	Power transferred—credit	.....	.....	.....
62	Other operations—credit	.....	.....	.....
	Total	1,683 88	1,541 10	1,123 78
	Conducting Transportation.			
63	Superintendence of transportation	132 88	119 00	132 88
64	Passenger conductors, motormen and trainmen	1,596 71	1,523 49	1,573 52
65	Freight and express conductors, motormen and trainmen	257 00	283 94	263 40
66	Miscellaneous car service employees	7 14	.....	6 72
67	Miscellaneous car service expenses	82 72	311 41	539 49
68	Station employees	.....	39 88	36 25
69	Station expenses	2 03	19 69	9 40
70	Carhouse employees	210 00	80 00	210 00
71	Carhouse expenses	.....	.....	.....
72	Operation of signal and interlocking apparatus	.....	.....	.....
73	Operation of telephone and telegraph lines	.....	.....	.....
74	Operation of floating equipment	.....	.....	.....
75	Operation of steam locomotives	.....	.....	.....
76	Freight and express collection and delivery	.....	.....	.....
77	Loss and damage	.....	.....	.....
78	Other transportation expenses	Cr. 38 03	.....	47 61
	Total	2,250 45	2,377 41	2,819 27
	Traffic.			
79	Superintendence and solicitation	13 88	.....	13 88
80	Advertising	28 00	.....	39 20
81	Parks, resorts and attractions	.....	.....	.....
82	Miscellaneous traffic expenses	.....	.....	.....
	Total	41 88	.....	53 08

RAILWAY.

Months, November, 1915, to October, 1917—Continued.

1917 October	1916 Total	1917 Total	Increase	Decrease	No.
$ c.	$ c.	$ c.	$ c.	$ c.	
17 00	252 00	204 00	.....	48 00	45
.....	.....	27 31	27 31	.....	46
.....	60 60	2 25	.....	58 35	47
.....	Cr. 70 31	147 55	217 86	.....	48
3 12	196 55	94 42	.....	102 13	49
.....	.....	.....	.....	.....	50
.....	.....	.....	.....	.....	51
.....	.....	.....	.....	.....	52
.....	.....	.....	.....	.....	53
.....	.....	.....	.....	.....	54
.....	.....	.....	.....	.....	55
.....	.....	23	23	.....	56
255 00	1,986 00	2,141 89	155 89	.....	57
95	23 48	46 16	22 68	.....	58
1,568 30	16,107 75	14,817 65	.....	1,290 10	59
.....	.....	.....	.....	.....	60
.....	.....	.....	.....	.....	61
.....	.....	.....	.....	.....	62
1,844 37	18,556 07	17,481 46	.....	1,074 61	
119 00	1,539 00	1,423 50	.....	115 50	63
1,634 52	18,854 95	17,141 82	.....	1,713 13	64
298 26	3,388 38	3,570 33	181 95	.....	65
16 25	66 22	55 98	.....	10 24	66
59 83	2,111 65	1,814 22	.....	297 43	67
38 75	36 25	441 13	404 88	.....	68
10 62	185 61	262 69	77 08	.....	69
.....	2,390 30	1,628 88	.....	761 42	70
.....	204 09	.....	.....	204 09	71
.....	.....	.....	.....	.....	72
.....	1 40	.....	.....	1 40	73
.....	.....	.....	.....	.....	74
.....	.....	.....	.....	.....	75
.....	.....	.....	.....	.....	76
.....	.....	.....	.....	.....	77
.....	43 70	229 54	185 84	.....	78
2,177 23	28,821 55	26,568 09	.....	2,253 46	
.....	129 25	.....	.....	129 25	79
.....	402 15	293 60	.....	108 55	80
.....	.....	.....	.....	.....	81
.....	.....	.....	.....	.....	82
.....	531 40	293 60	.....	237 80	

NIPISSING CENTRAL

Comparative Statement of Earnings and Expenditures by

No.	General and Miscellaneous.	1915 November.	1916 November.	1915 December.
		$ c.	$ c.	$ c.
83	Salaries and expenses of general officers			
84	Salaries and expenses of general office clerks	155 00	165 00	155 00
85	General office supplies and expenses	10 00	5 00	5 00
86	Law expenses		24 56	
87	Relief department expenses			
88	Pensions and gratuities			
89	Miscellaneous general expenses	3 90		3 00
90	Valuation expenses			
91	Amortization of franchises			
92	Injuries and damages			
93	Insurance	48 20	35 39	32 77
94	Stationery and printing	233 11	26 77	32 60
95	Store expenses			
96	Garage and stable expenses			
97	Rent of tracks and facilities	102 00	50 00	50 00
98	Rent of equipment		262 80	347 85
99	Other operations—Dr.			
100	Other operations—Cr.			
	Total	552 21	569 52	626 22

Comparative Statement of Earnings and Expenditures by

No.	General and Miscellaneous.	1916 March.	1917 March.	1916 April.
		$ c.	$ c.	$ c.
83	Salaries and expenses of general officers	248 33		248 33
84	Salaries and expenses of general office clerks	186 66	165 00	186 66
85	General office supplies and expenses	5 00	5 00	5 00
86	Law expenses		61	
87	Relief department expenses			
88	Pensions and gratuities			
89	Miscellaneous general expenses	3 50	18 55	1 20
90	Valuation expenses			
91	Amortization of franchises			
92	Injuries and damages	104 00	102 96	39 66
93	Insurance	35 39	35 34	35 39
94	Stationery and printing	28 01	25 70	
95	Store expenses			
96	Garage and stable expenses			
97	Rent of tracks and facilities	50 00	50 00	150 74
98	Rent of equipment	294 30	285 00	335 70
99	Other operations—Dr.			
100	Other operations—Cr.			
	Total	955 19	688 16	1,002 68

RAILWAY

Months, November, 1915, to October, 1917.—Continued.

1916 December.	1916 January.	1917 January.	1916 February.	1917 February.	No.
$ c.	$ c.	$ c.	$ c.	$ c.	
.....	.....	.....	248 36	.....	83
165 00	160 00	165 00	186 72	165 00	84
5 00	11 40	5 00	5 00	5 00	85
5 73	.....	.....	.....	.....	86
.....	.....	.....	.....	.....	87
.....	.....	.....	.....	.....	88
3 75	3 35	1 90	2 40	18 65	89
.....	.....	.....	.....	.....	90
.....	.....	.....	.....	.....	91
.....	.....	.....	25 00	.....	92
35 34	35 41	35 34	35 39	35 34	93
16 05	13 73	18 15	3 50	13 90	94
.....	.....	.....	.....	.....	95
.....	.....	.....	.....	.....	96
50 00	159 66	50 00	50 00	50 00	97
.....	199 35	310 50	.....	352 05	98
.....	.....	.....	.....	.....	99
.....	.....	.....	.....	.....	100
280 87	582 90	585 89	556 37	639 94	

Months, November, 1915, to October, 1917.—Continued.

1917 April.	1916 May.	1917 May.	1916 June.	1917 June.	No.
$ c.	$ c.	$ c.	$ c.	$ c.	
.....	248 33	.....	248 33	.....	83
212 67	186 66	165 00	186 66	162 00	84
15 15	5 00	5 00	5 00	80 00	85
.....	3 00	.....	.....	.....	86
.....	.....	.....	.....	.....	87
.....	.....	.....	.....	.....	88
1 45	.....	4 00	2 90	4 85	89
.....	.....	.....	.....	.....	90
.....	.....	.....	.....	.....	91
.....	32 11	.....	400 00	13 83	92
35 34	35 39	35 34	44 14	47 13	93
171 07	12 50	91 19	15 91	13 49	94
.....	.....	.....	.....	.....	95
.....	.....	.....	.....	.....	96
50 00	97 45	50 00	50 00	50 00	97
308 25	278 55	335 25	202 95	189 75	98
.....	.....	.....	.....	.....	99
.....	.....	.....	.....	.....	100
793 93	898 99	685 78	1,155 89	561 05	

NIPISSING CENTRAL

Comparative Statement of Earnings and Expenditures by

No.	General and Miscellaneous.	1916 July.	1917 July.	1916 August.
		$ c.	$ c.	$ c.
83	Salaries and expenses of general officers	248 33	.....	248 33
84	Salaries and expenses of general office clerks	191 66	160 16	191 66
85	General office supplies and expenses	5 05	5 00	9 91
86	Law expenses	.....	.....	.....
87	Relief department expenses	.....	.....	.....
88	Pensions and gratuities	.....	.....	.....
89	Miscellaneous general expenses	.....	1 95	5 85
90	Valuation expenses	.....	.....	.....
91	Amortization of franchises	.....	.....	.....
92	Injuries and damages	.....	.....	.....
93	Insurance	35 39	95 83	35 39
94	Stationery and printing	165 02	88 45	195 68
95	Store expenses	.....	.....	.....
96	Garage and stable expenses	.....	.....	.....
97	Rent of tracks and facilities	50 00	50 00	102 29
98	Rent of equipment	218 70	270 00	338 40
99	Other operations—Dr.	.....	.....	.....
100	Other operations—Cr.	.....	.....	.....
	Total	914 15	671 39	1,127 51

No.	General and Miscellaneous.	Total, 1916.
		$ c.
83	Salaries and expenses of general officers	2,235 00
84	Salaries and expenses of general office clerks	2,170 00
85	General office supplies and expenses	76 36
86	Law expenses	3 00
87	Relief department expenses	.....
88	Pensions and gratuities	.....
89	Miscellaneous general expenses	44 95
90	Valuation expenses	.....
91	Amortization of franchises	.....
92	Injuries and damages	1,061 77
93	Insurance	443 64
94	Stationery and printing	725 27
95	Store expenses	.....
96	Garage and stable expenses	.....
97	Rent of tracks and facilities	1,042 72
98	Rent of equipment	2,776 05
99	Other operations—Dr.	.....
100	Other operations—Cr.	.....
	Total	10,578 76

RAILWAY

Months, November, 1915, to October, 1917.—Continued.

1917 August.	1916 September.	1917 September.	1916 October.	1917 October.	No.
$ c.	$ c.	$ c.	$ c.	$ c.	
.....	248 33	.....	248 33	.....	83
165 00	191 66	165 00	191 66	170 00	84
29 28	5 00	5 00	5 00	7 51	85
.....	.....	.....	.....	.....	86
.....	.....	.....	.....	.....	87
.....	.....	.....	.....	.....	88
6 20	18 40	4 00	45	29 40	89
.....	.....	.....	.....	.....	90
.....	.....	.....	.....	.....	91
.....	.....	.....	461 00	.....	92
35 34	35 39	35 34	35 39	35 34	93
92 81	5 35	33 95	19 86	18 76	94
.....	.....	.....	.....	.....	95
.....	.....	.....	.....	.....	96
50 00	130 58	50 00	50 00	50 00	97
489 00	265 95	471 00	294 30	293 40	98
.....	.....	.....	.....	.....	99
.....	.....	.....	.....	.....	100
867 63	900 66	764 29	1,305 99	604 41	

Total, 1917	Increase.	Decrease.	No.
$ c.	$ c.	$ c.	
.....	.....	2,235 00	83
2,024 83	.....	145 17	84
171 94	95 58	.....	85
30 90	27 90	.....	86
.....	.....	.....	87
.....	.....	.....	88
94 70	49 75	.....	89
.....	.....	.....	90
.....	.....	.....	91
116 79	.....	944 98	92
496 41	52 77	.....	93
610 29	.....	114 98	94
.....	.....	.....	95
.....	.....	.....	96
600 00	.....	442 72	97
3,567 00	790 95	.....	98
.....	.....	.....	99
.....	.....	.....	100
7,712 86	.....	2,865 90	

NIPISSING CENTRAL

Comparative Statement of Earnings and Expenditures by

Miscellaneous Statistics.	1915 November.	1916 November.	1915 December.	1916 December.
Passenger car hours	2,120	2,256	2,184	2,293
Passenger car miles	21,707	23,102	22,362	23,483
Total passengers carried	106,851	104,273	112,446	109,359
Average daily receipts	$266 02	$262 91	$275 90.7	$270 88
Average receipts per car hour—passenger	3 23.5	2 97.3	3 32.8	3 16.8
Average receipts per car mile—passenger	31.6	29	32.5	30.9
Earnings per passenger	06.4	06.4	06.4	06·6

Comparative Statement of Earnings and

Miscellaneous Statistics.	1916 April.	1917 April.	1916 May.	1917 May.
Passenger car hours	2,174	1,373	2,348	1,723
Passenger car miles	22,261	14,396	24,043	17,644
Total passengers carried	120,750	91,749	132,417	93,562
Average daily receipts	$318 26.9	$243 18	$308 77	227 02
Average receipts per car hour—passenger	3 60.5	4 40.3	3 70.9	3 57.5
Average receipts per car mile—passenger	37.2	42	36.2	34.9
Earnings per passenger	06.8	06.6	06.5	06.5

Comparative Statement of Earnings and

Miscellaneous Statistics.	1916 September.	1917 September.	1916 October.	1917 October.
Passenger car hours	2,300	1,997	2,311	2,171
Passenger car miles	23,552	20,444	23,663	22,231
Total passengers carried	129,985	104,454	109,269	106,887
Average daily receipts	$324 25	$284 58	$257 50	$274 43.4
Average receipts per car hour—passenger	3 78.3	3 70.9	3 04.4	3 40.3
Average receipts per car mile—passenger	36.9	36.2	29.7	33.2
Earnings per passenger	06.7	07	06.4	06.9

RAILWAY

Months, November, 1915, to October, 1917.—Continued.

1916 January.	1917 January.	1916 February.	1917 February.	1916 March.	1917 March.
2,138	2,317	1,986	2,080	2,215	1,396
21,892	23,731	20,313	21,299	22,681	14,296
98,164	100,712	97,047	92,425	115,991	84,900
$255 06.4	$239 33.9	$266 99.6	$235 73.5	$287 69.6	$200 97.6
3 04.3	2 74.6	3 09.5	2 80.9	3 36.3	3 79.2
29.7	26.8	30.3	27.4	32.9	37
06.6	06.3	06.3	06.3	06.4	06.2

Expenditures by Months, etc.—Continued.

1916 June.	1917 June.	1916 July.	1917 July.	1916 August.	1917 August.
2,284	1,755	2,346	2,010	2,379	2,068
23,383	17,966	24,023	20,582	24,361	21,176
135,454	99,542	138,709	107,533	142,813	111,994
$331 68	$250 96	$335 08	$299 47	$344 10	$277 64
3 96.6	3 67.2	4 04.3	3 72.5	4 10.5	3 60.9
38.7	35.9	39.5	36.4	40.1	35.2
06.8	06.4	06.8	06.9	06.7	06.6

Expenditures by Months, etc.—Concluded.

1916 Total.	1917 Total.	Increase.	Decrease.
26,785	23,439	.....	3,346
274,241	240,350	.....	33,891
1,439,896	1,207,390	.....	232,506
$297 64.3	$255 70.3	.....	$41 94
3 55.6	3 40.7	.....	14.9
34.7	33.2	.....	01.5
06.6	06.6	.....	.....

NIPISSING CENTRAL RAILWAY

Statement Showing Investment in Road and Equipment November 1st, 1916—October 31st, 1917

Grading		$482 52	
Ties		141 46	
Rails, Rail Fastenings and Joints		710 58	
Track and Roadway Labour		422 53	
Passenger and Combination Cars	Cr.	8,705 91	
			Cr. 6,948 82
Detail of Charges.			
Crossover Mileage 110		1,212 67	
Siding Riordan Pulp and Paper Co.		544 42	
New Passenger Cars, Nos. 22, 24 and 26		35,285 07	
Passenger Car No. 6—Rebuilt		7,725 63	
Passenger Cars Destroyed and Retired	Cr.	51,716 61	
			Cr. 6,948 82

NIPISSING CENTRAL RAILWAY COMPANY

Statement of Wages paid Employees during Year ended October 31st, 1917

OPERATION.

McDonald, K.	Superintendent	$2,040 00	
Crouch, R. J.	Cashier	770 00	
Murray, D. R.	Conductor and Cashier	1,122 92	
Stewart, W. F.	Land Agent	919 60	
Miller, Miss N.	Stenographer	670 00	
Andrews, Mrs. J.	Janitress	60 00	
Montgomery, A.	Conductor	1,037 74	
Moody, F.	"	79 04	
Holden, E.	"	1,125 21	
McDonald, A. A.	"	1,142 92	
Curry, T. W.	"	1,266 21	
McIsaac, N.	"	1,134 97	
Noble, J.	"	604 16	
Mills, J. G.	"	1,081 62	
Johnston, W.	"	100 50	
Doughty, J.	"	895 87	
Prescott, A. R.	"	172 93	
McRae, A. J.	Motorman	1,269 55	
Quinn, P.	"	1,125 86	
Finley, F.	"	1,312 79	
Lyons, H. C.	"	1,189 40	
Parks, W.	"	1,272 24	
Richardson, R.	"	1,228 85	
Garrison, P.	"	1,198 13	
Lemieux, P.	"	1,158 59	
Beer, F.	"	617 38	
Peterson, C.	"	1,070 70	
Nickason, G.	"	412 14	
Wright, B. H.	"	199 12	
Nord, J.	"	200 07	
Hoppins, G.	"	31 59	
Denison, S.	Switchman	54 50	
Flatt, D. C.	"	474 05	
Mercier, A.	Sanitary Work	3 00	
			27,041 65

MAINTENANCE.

McDonald, R.	Barn Foreman	180 00	
Draper, J.	"	1,240 00	
Davies, B.	S.S. Operator	946 90	
McQuaig, J.	"	960 00	
Nickason, G.	"	304 35	
Davies, J. H.	"	256 84	
Fairbrother, R.	"	23 31	
Harper, E.	Cleaner	182 97	
Curry, W. J.	"	65 81	
Derosier, P.	"	451 13	
Hagar, W.	Lineman	247 75	
Page, F.	"	340 89	
Pirie, G.	"	226 87	
Hawley, H. B.	Arm. Winder	70 00	
Pratt, G.	Electrician	59 00	
Tipler, H.	Carpenter	76 64	
Brett, F.	"	343 10	
Viau, J.	Painter	348 07	
Lansloot, R.	"	67 60	
Lato, G.	"	278 25	
Montgomery, P.	Blacksmith	940 20	
Presley, W.	Carpenter	140 35	
			7,750 0

TRACK SECTION GANGS

SECTION NO. 1.

Foreman	1,002 20	
Labourers	1,380 66	
		2,382 8

SECTION NO. 2.

Foreman	1,189 52	
Labourers	2,649 04	
		3,838 56
Total Payroll		$41,013 10

Detail of Nipissing Central Railway Expenditures for Fiscal Year, ending October 31st, 1917.

ALEXANDER & CABLE LITHOGRAPHING CO., LIMITED, TORONTO, ONT.

1839—Letterheads	$25 00	
		$25 00

ADAMS, WESTLAKE CO., CHICAGO, ILL.

1696—Door holders	$24 88	
		$24 88

AMERICAN MUSEUM OF SAFETY, NEW YORK, N.Y.

1646—Membership fees	$25 00	
		$25 00

F. BRETT, NORTH BAY, ONT.

1606—Expenses	$10 50	
		$10 50

MUNICIPAL CORPORATION OF BUCKE.

1517—Taxes	$2,046 20	
1815— "	80 73	
		$2,126 93

BANK OF OTTAWA, COBALT, ONT.

1938—Charges *re* deposit	$0 44	
		$0 44

JOHN BOURKE & CO., NORTH BAY, ONT.

1757—Lime	$36 05	
		$36 05

BEGG BROS., NORTH BAY, ONT.

1655—Tape	$0 30	
		$0 30

THE J. G. BRILL & CO., PHILADELPHIA, PA.

1822—Springs	$90 60	
1841—Handles	98 15	
1890—Springs, etc.	219 60	
		$408 35

BIRD & SON, HAMILTON, ONT.

1759—Wall Board	$70 43	
		$70 43

COBALT DAILY NUGGET, LIMITED, COBALT, ONT.

1608—Printing	$2 75	
1680— "	8 00	
1657— "	18 50	
1708— "	23 50	
1728— "	21 00	
1689— "	11 50	
1705— "	4 00	
1782— "	6 50	
1808— "	7 95	
1769— "	1 75	
1843— "	4 00	
		$109 45

B. J. Coghlin Co., Ltd., Montreal, Que.

1615—Springs	$6 16	
		$6 16

Chas. Courtmarche, Postmaster, North Cobalt, Ont.

1854—Box Rent	$3 00	
		$3 00

Coleman Fare Box Co., Toronto, Ont.

1824—Repairs, Fare Boxes	$43 95	
1767— " "	20 98	
1821—Express Charges	1 35	
		$66 28

Canadian General Electric Co., Ltd., Toronto, Ont.

1521—Electrical Supplies	$141 03	
1555— " "	94 00	
1571— " "	2 40	
1662— " "	2 08	
1651— " "	57	
1659— " "	147 59	
1726— " "	41 25	
1695—Motors, etc.	3,597 09	
1784—Headlight material	215 97	
1820—Electrical Supplies	13 72	
1775— " "	14 16	
1817— " "	44 69	
1896— " "	803 81	
1920— " "	19 80	
		$5,138 16

Canadian Westinghouse Co., Ltd., Hamilton, Ont.

1569—Air brake material	$12 00	
1658— " "	3 23	
1611— " "	35	
1700—Armature, etc.	489 00	
1693—Armature coils	152 00	
1768—Air brake material	114 10	
1763—Whistles, etc.	59 80	
1836—Gasket	1 47	
1856—Valve	14 22	
1819—Sockets, etc.	8 51	
		$854 68

Cochrane Hardware, Limited, North Bay, Ont.

1573—Hardware supplies	$4 11	
1660— " "	5 29	
1762— " "	17 30	
1730— " "	4 50	
1773— " "	5 84	
1832— " "	4 49	
1892— " "	7 56	
1904— " "	8 20	
		$57 29

Canadian Fairbanks Co., Ltd., Toronto, Ont.

1613—Belting	$3 72	
		$3 72

Cobalt Foundry, Cobalt, Ont.

1780—Welding brake arm	$2 95	
		$2 95

COBALT REDUCTION CO., LTD., COBALT, ONT.

1645—Oxygen, etc.	$17 33	
		$17 33

CANADA PAINT CO., LTD., MONTREAL, QUE.

1813—Putty	$15 61	
		$15 61

S. J. CHERRY, NORTH BAY, ONT.

1698—Tail pieces for valves	$17 62	
1713— " "	2 92	
		$20 54

CROUSE-HINDS CO. OF CANADA, LTD., TORONTO, ONT.

1525—Electrical supplies	$6 60	
1549— " "	51 21	
1575— " "	79 92	
1617— " "	46 80	
1790— " "	24 00	
1771— " "	6 45	
1882— " "	131 33	
		$346 31

CANADIAN INSPECTION & TESTING LAB. LTD., MONTREAL, QUE.

1894—Inspection of steel for car barns	$9 02	
		$9 02

CANADA METAL CO., LTD., TORONTO, ONT.

1691—Solder	$17 68	
		$17 68

CANADIAN YALE & TOWNE, LTD., TORONTO, ONT.

1918—Locks	$20 23	
		$20 23

CANADIAN EXPRESS CO., NORTH BAY, ONT.

1523—Express charges	$1 90	
1626— " "	2 45	
1565— " "	65	
1648— " "	1 10	
1718— " "	2 95	
1719— " "	90	
1802— " "	2 20	
1761— " "	3 15	
		$15 30

CANADIAN GOLD CAR HEATING & LIGHTING CO., LTD., TORONTO, ONT.

1765—Gauges	$8 25	
		$8 25

DAWSON & CO., LTD., MONTREAL, QUE.

1590—Trolley spindles	$65 00	
1577—Springs	4 05	
1621—Washers	1 30	
1661—Chains, etc.	82 02	
1845—Washers	6 85	
		$159 22

DAY & GORDON, HAILEYBURY, ONT.

1547—Services		$24 56	
1628— "		5 73	
1619— "		61	
			$30 90

DOMINION EXPRESS CO., NORTH BAY, ONT.

1527—Express charges		$3 90	
1630— " "		45	
1650— " "		75	
1623— " "		1 20	
1724— " "		4 25	
1717— " "		6 90	
1804— " "		40	
			$17 85

DISSTON & SONS, LIMITED, TORONTO, ONT.

1666—Saw blades		$2 64	
1788— " "		3 48	
			$6 12

DOMINION ENVELOPE CO., LTD., TORONTO, ONT.

1529—Envelopes		$2 80	
1727— "		16 75	
1732— "		3 05	
1818— "		5 50	
			$28 10

EMPLOYERS' LIABILITY ASSURANCE CORPORATION, TORONTO, ONT.

1758—Premiums		$11 79	
			$11 79

ELECTRIC RAILWAY JOURNAL, NEW YORK, N.Y.

1551—Subscription		$4 50	
1772— "		4 50	
1741— "		4 50	
			$13 50

C. L. FERGUSON, PAYMASTER, NORTH BAY, ONT.

1541—Pay rolls		$3,748 36	
1604— "		3,634 47	
1567— "		3,612 58	
1656— "		3,317 44	
1653— "		3,577 62	
1722— "		2,785 34	
1711— "		3,132 46	
1764— "		3,221 36	
1753— "		3,320 77	
1852— "		3,474 82	
1837— "		3,482 50	
1914— "		3,705 38	
			$41,013 10

F. R. GIBSON, HAILEYBURY, ONT.

1591—Installing heating system in cars		$106 31	
1922— " " " offices and car barns, North Cobalt		606 98	
			$713 29

GENERAL SUPPLY CO. OF CANADA, LTD., OTTAWA, ONT.

1592—Hardware supplies	$1 04	
1664— " "	6 02	
1663— " "	3 77	
		$10 83

CORPORATION OF TOWN OF HAILEYBURY, HAILEYBURY, ONT.

1725—Taxes	$675 00	
1762— "	18 01	
		$693 01

HAMILTON STAMP & STENCIL WORKS, LTD., HAMILTON, ONT.

1694—Stamps	$2 35	
1697— "	1 33	
		$3 68

HAMILTON BRIDGE WORKS CO., HAMILTON, ONT.

1665—Iron	$4 75	
1777— "	198 00	
1838—Steel	2,720 00	
		$2,922 75

THE HAILEYBURIAN, HAILEYBURY, ONT.

1805—Advertising	$4 80	
		$4 80

HENDERSON & ANGUS, NORTH BAY, ONT.

1840—Brick	$210 00	
		$210 00

HYDRO-ELECTRIC POWER COMMISSION OF ONTARIO, TORONTO, ONT.

1610—Electrical supplies	$39 00	
1625— " "	47 00	
1734— " "	58 81	
1823— " "	61 60	
1898— " "	61 60	
		$268 01

IMPERIAL OIL CO., LTD., TORONTO, ONT.

1531—Oil	$15 94	
1668— "	61 93	
1794— "	11 87	
1816— "	15 46	
1779— "	26 15	
1825— "	14 62	
1924— "	17 39	
		$163 36

INTERNATIONAL REGISTER CO., CHICAGO, ILL.

1858—Register	$180 00	
		$180 00

JACKSON PRESS, KINGSTON, ONT.

1533—Printing	$18 50	
1557— "	8 50	
1667— "	6 00	
1736— "	5 00	
1729— "	50 25	
1842— "	12 50	
1906— "	3 50	
		$104 25

ANDREW JOHNSTON, NORTH BAY, ONT.

1936—Expenses	$42 90	
		$42 90

KNECHTEL FURNITURE CO., LTD., HANOVER, ONT.

1704—Furniture	$10 05	
		$10 05

LYMAN TUBE & SUPPLY CO., LTD., MONTREAL, QUE.

1669—Headlight carbons	$20 00	
1686—Trolley poles	24 00	
1699—Washers	3 00	
1738—Trolley bases	71 80	
1792—Wheels	80 00	
1781—Trolley poles	46 75	
1844—Washers	5 04	
1827—Springs, etc.	605 64	
1928—Bushings, etc.	129 50	
		$985 73

LEWIS BROS., LIMITED, MONTREAL, QUE.

1908—Lock sets	$55 67	
1926—Butts	3 56	
		$59 23

G. LATO, NORTH COBALT, ONT.

1612—Expenses	$10 50	
		$10 50

R. LANSLOOT, NORTH BAY, ONT.

1607—Expenses	$10 50	
		$10 50

LINDSAY & MCCLUSKEY, NORTH BAY, ONT.

1783—Lime	$31 90	
		$31 90

MAITLAND ROOFING & SUPPLY CO., TORONTO, ONT.

1916—Refund, deposit on contract car barns, North Cobalt	$150 00	
1950—Roofing, car barns, North Cobalt	1,572 00	
		$1,722 00

MINISTER OF INLAND REVENUE, OTTAWA, ONT.

1642—War tax	$12 60	
1752— "	10 40	
1814— "	10 75	
1857— "	13 80	
		$47 55

METHODIST BOOK & PUBLISHING HOUSE, TORONTO, ONT.

1579—Printing	$9 00	
		$9 00

WESLEY MCKNIGHT, NEW LISKEARD, ONT.

1561—Uniform	$23 00	
1709—Uniforms	480 00	
		$503 00

H. H. MacLean, North Bay, Ont.

1647—Meals supplied employees	$3 75	
		$3 75

Northern Ontario Light & Power, Ltd., Cobalt, Ont.

1543—Current for power	$1,365 75	
1636— " "	1,444 50	
1593— " "	1,424 25	
1684— " "	1,325 25	
1633— " lighting	3 50	
1683— " power	1,118 25	
1740— " "	982 50	
1723— " "	933 00	
1766— " lighting	4 00	
1810— " power	972 75	
1787— " "	1,148 10	
1872— " "	1,249 80	
1849— " "	1,285 20	
1878— " lighting	4 53	
1940— " "	72	
1942— " power	1,480 80	
		$14,742 90

Northern Electric Manfg. Co., Ltd., Toronto, Ont.

1594—Tape	$7 50	
1631—Wire	87 27	
1688—Belt	7 25	
		$102 02

Northern Canada Supply Co., Ltd., Cobalt, Ont.

1671—Cement	$8 38	
		$8 38

Northern Lumber Mills, Ltd., North Cobalt, Ont.

1701—Lumber	$9 00	
1796— "	2 62	
1785— "	16 50	
1847— "	806 00	
1910— "	276 86	
		$1,110 98

National Safe & Lock Co., Cleveland, Ohio.

1743—Safe	$65 00	
		$65 00

National Drug & Chemical Co. of Canada, Toronto, Ont.

1627—Chamois	$4 92	
		$4 92

National Equipment Co., Ltd., Toronto, Ont.

1629—Pump parts	$3 62	
1829— "	4 52	
		$8 14

The Ottawa Car Co., Ltd., Ottawa, Ont.

1742—Door rollers, etc.	$12 40	
		$12 40

OHIO BRASS CO., MANSFIELD, OHIO.

1535—Screws, etc.	$27 12	
1731—Tools	9 87	
		$36 99

PRESTON CAR & COACH CO., LTD., PRESTON, ONT.

1614—Castings	$0 98	
1670—Coach material	41 75	
1635—Locks	12 60	
		$55 33

PILKINGTON BROS., LIMITED, TORONTO, ONT.

1735—Glass	$55 80	
1789— "	92 00	
1860— "	7 20	
1851— "	120 34	
		$275 34

THE PLANET, CHATHAM, ONT.

1846—Forms	$9 00	
		$9 00

A. C. RORABECK, NORTH BAY, ONT.

1791—Soda and acid	$2 15	
		$2 15

RICE, LEWIS & SON, LIMITED, TORONTO, ONT.

1616—Hardware supplies	$5 51	
1581— " "	85	
1672— " "	69	
1673— " "	4 20	
1690— " "	5 90	
1733— " "	7 74	
		$24 89

STEPHENSON & SON, NEW LISKEARD, ONT.

1745—Advertising	$3 30	
		$3 30

W. F. STEWART, NORTH COBALT, ONT.

1519—Commission, land sales	$8 75	
1602— " "	2 50	
1632— " "	1 75	
1583— " "	1 50	
1637— " "	3 50	
1685— " "	4 00	
1744— " "	7 25	
1715— " "	5 55	
1721— " "	45 65	
1806— " "	5 50	
1807— " "	6 80	
1874— " "	13 28	
1886— " "	13 20	
		$119 23

STEEL CO. OF CANADA, LTD., HAMILTON, ONT.

1674—Machine bolts	$2 08	
1603—Screws	11 25	
1639—Iron	12 93	
1675—Steel	3 45	
1706—Screws	6 53	
1755—Stove bolts	2 27	
		$38 51

SOUTHAM PRESS, LIMITED, TORONTO, ONT.

1692—Forms	$125 00	
1793— "	71 50	
1862— "	68 75	
		$265 25

SAMSON CORDAGE WORKS, BOSTON, MASS.

1786—Cord	$10 56	
		$10 56

WILLIAM SCULLY, MONTREAL, QUE.

1677—Uniform caps	$47 25	
1831— " "	2 25	
1930— " "	38 25	
		$87 75

SIMM'S LIVERY & CARTAGE CO., COBALT, ONT.

1714—Cartage	$4 00	
		$4 00

TEMISKAMING & NORTHERN ONTARIO RLY., TORONTO, ONT.

1513—Proportion constable's time and lighting Cobalt station	$44 89
1515—Car service, balance	262 80
1537—Car repairs	22 58
1539—Miscellaneous supplies	556 33
1545—Rental, joint facilities, etc.	1,060 71
1600—Supplies, proportion constable's time and lighting Cobalt station	281 63
1618—Ties	9 60
1620—Proportion constable's time and lighting Cobalt station	50 69
1634—Insurance premiums	424 08
1640—Work performed North Bay shops	443 74
1644—Rental, joint facilities, etc.	1,077 52
1559—Duty on rail bonds, etc.	28 88
1585—Coal	463 37
1587—Work performed	112 10
1595—Car service balance, etc.	177 36
1599—Rental joint facilities, etc.	1,063 42
1601—Car service balance	198 90
1654—Proportion constable's time and lighting Cobalt station	113 86
1676—Miscellaneous supplies	1,299 16
1678—Car service balance	352 05
1682—Rental joint facilities, etc.	1,020 92
1649—Car service balance, etc.	985 54
1679—Miscellaneous supplies	401 99
1687—Rental joint facilities, etc.	1,002 99
1710—Miscellaneous supplies	618 36
1712—Car service balance	308 25
1720—Work performed, North Cobalt	607 98
1746—Proportion constable's time and lighting Cobalt station, etc.	213 10
1703—Coal	256 54
1707—Car service balance	335 25
1754—Work performed, North Cobalt	37 07
1756—Rental joint facilities	1,054 04
1737—Miscellaneous supplies	347 06
1739—Rental joint facilities	1,034 43
1760—Car service balance	189 75
1770—Proportion constable's time and lighting Cobalt station	42 52
1798—Coaches	29,925 00
1800—Car repairs	28 03
1812—Proportion constable's time and lighting Cobalt station	63 90
1826—Miscellaneous supplies	239 48
1828—Rental joint facilities	1,048 11

1747—Car service balance	270 00	
1751—Proportion constable's time and lighting Cobalt station	44 47	
1797—Insurance premiums	60 49	
1799—Loading scrap from car barns, North Cobalt	254 06	
1801—Miscellaneous supplies	1,183 90	
1809—Car repairs	1,346 04	
1811—Rental joint facilities, etc.	1,147 61	
1830—Car service balance	489 00	
1848—Miscellaneous supplies	750 49	
1864—Proportion constable's time and lighting Cobalt station	51 59	
1876—Work performed car barns, North Cobalt	1,733 76	
1880—Rental joint facilities	1,069 86	
1833—Carbolocene, etc.	160 04	
1835—Car service balance	471 00	
1853—Miscellaneous supplies	1,567 88	
1859—Rental joint facilities	1,051 83	
1861—Work performed, North Bay Junction	2,801 84	
1884—Proceeds from operation	2,000 00	
1900—Miscellaneous supplies, etc.	1,090 39	
1946—Car service balance	293 40	
1948—Work performed car barns, North Cobalt, etc.	2,030 83	
1952—Rental joint facilities	1,065 67	
		$68,738 13

TEMISKAMING TELEPHONE CO., NEW LISKEARD, ONT.

1622—Telephone service	$1 50	
1638— " "	2 25	
1597— " "	1 90	
1652— " " and rental	18 65	
1605— " " "	18 55	
1716— " "	1 45	
1774— " "	4 85	
1749— " "	80	
1795— " "	1 15	
1866— " "	3 20	
1838— " " and rental	20 20	
1932— " "	6 25	
1944— " "	2 95	
		$83 70

J. J. TURNER & SONS, PETERBOROUGH, ONT.

1641—Union Jack	$10 52	
		$10 52

J. & J. TAYLOR, LTD., TORONTO, ONT.

1834—Vault door	$95 00	
		$95 00

H. TIPLER, NORTH BAY, ONT.

1609—Expenses	$10 50	
		$10 50

UNITED TYPEWRITER CO., LIMITED, TORONTO, ONT.

1803—Pencil sharpener	$1 89	
1596—Ribbon, etc.	7 70	
		$9 59

J. VIAN, NORTH COBALT, ONT.

1624—Expenses	$10 50	
		$10 50

WABI IRON WORKS, LIMITED, NEW LISKEARD, ONT.

1598—Brake shoes	$76 45	
1563— " "	147 50	
1643—Castings	3 15	
1681—Brake shoes	42 71	
1748— " "	50 58	
1778— " "	27 97	
1850— " "	148 89	
1868— " "	60 34	
1902— " "	128 97	..
1912— " "	138 51	
		$825 07

R. WALLACE & SON, NORTH BAY, ONT.

1855—Brick	$98 00	
		$98 00

WALKERVILLE HARDWARE CO., LIMITED, WALKERVILLE, ONT.

1589—Cement seal	$17 50	
		$17 50

WORKMEN'S COMPENSATION BOARD, TORONTO, ONT.

1776—Assessment Workmen's Compensation Board	$13 83	
		$13 83

YOUNG CO., LIMITED, NORTH BAY, ONT.

1750—Bon Ami	$3 75	
		$3 75

YOUNG LUMBER CO., NORTH BAY, ONT.

1870—Frames, etc.	$299 50	
1934—Set stairs	38 00	
		$337 50
Total		$146,671 14

RECAPITULATION ACCOUNTS PAYABLE.

NOV. 1ST, 1916, TO OCT. 31ST, 1917.

General ledger balance as of Nov. 1st, 1916	.....	$32,974 84
Disbursements as per detailed statement	.....	146,671 14
Cash payments by Treasurer	$164,532 01	.....
General ledger balance as of Oct. 31st, 1917	15,113 97	.....
	$179,645 98	$179,645 98

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Temiskaming and Northern Ontario Railway Commission

THE MINING INDUSTRY

IN THAT PART OF

NORTHERN ONTARIO

SERVED BY THE

Temiskaming and Northern Ontario Railway

ONTARIO GOVERNMENT RAILWAY

CALENDAR YEAR 1917

By ARTHUR A. COLE
Mining Engineer

PRINTED BY ORDER OF
THE LEGISLATIVE ASSEMBLY OF ONTARIO

TORONTO:
Printed and Published by A. T. WILGRESS, Printer to the King's Most Excellent Majesty
1918

To His Honour Sir John Strathearn Hendrie, K.C.M.G., C.V.O., a Colonel in the Militia of Canada, etc., etc.

Lieutenant-Governor of the Province of Ontario.

May it Please Your Honour:

The undersigned has the honour to present to Your Honour Report of the Mining Engineer on the Mining Industry in that part of Northern Ontario served by the Temiskaming and Northern Ontario Railway for the calendar year 1917.

Respectfully submitted,

F. G. Macdiarmid,

Minister of Public Works and Highways.

Hon. Finlay G. Macdiarmid,

Minister of Public Works and Highways,

Toronto.

Sir,—I have the honour, by direction, to submit to you Report of the Mining Engineer on the Mining Industry, in that part of Northern Ontario served by the Temiskaming and Northern Ontario Railway, for the calendar year 1917.

I have the honour to be,

Sir,

Your obedient servant,

W. H. Maund,

Secretary-Treasurer.

TEMISKAMING AND NORTHERN ONTARIO RAILWAY COMMISSION

J. L. ENGLEHART, Chairman.

DENIS MURPHY, Commissioner (Deceased).

GEO. W. LEE, Commissioner.

W. H. MAUND, Secretary-Treasurer.

A. A. COLE, Mining Engineer.

Opening up a claim in the Lightning River District—Early Winter, 1917.

SILVER

When the great war broke out mining, like most of the industries, felt the shock and took a little time to readjust itself to new conditions. Then when the tremendous war orders began to come in almost all metals except gold and silver increased in value. Gold, as the basis of values, nominally remained stationary, but silver did not seem to be needed, the demand slackened and the price dropped. The silver market went from bad to worse till at last the price of 46 cents per ounce was reached, the lowest price ever recorded in the history of the industry. Naturally these conditions had an adverse effect on the production of the Cobalt Silver Camp, and all operations were curtailed. Several of the mines continued producing silver, but stored it all awaiting a more favourable market, and when the rise did come these companies reaped the benefit.

All the principal warring nations are operating on a gold standard, consequently each nation began to hoard its gold with the result that it practically disappeared from circulation. Ordinary business had to be carried on by the use of the small amount of silver coinage already in circulation and with paper money for the rest. Even in times of stress much less serious than the present the average individual prefers silver to paper, and this is particularly the case in Europe, so that the demand for a larger silver coinage gradually became more and more insistent. Great Britain, France, and the United States all entered the silver market, with the result that a more phenomenal rise took place, and the silver miner at last considered that he was coming into his own. The price at the end of 1916 was 75 cents per ounce, and this price held till July, 1917, when a further rise took place, reaching a maximum on September 25th when the price was $1.08½ per ounce. Then the price receded to about 85 cents, at which point it stood when the year closed. The average price for the year was 81.47 cents.

In the early days of the Cobalt Camp a small allowance was made to shippers for ore containing a cobalt content of from 6 per cent. up. Then for some time no allowance whatever was made for the cobalt contents of the ore, but recently the demand for metallic cobalt has increased to such an extent, particularly for the manufacture of the alloy "stellite," that the smelters are paying again for the cobalt. One mining company's receipts for the year for cobalt contents alone amounted to $40,000. Still more recently the demand has become keener, one of the reasons being that there is a large call for arsenic as well as cobalt, and as the cobalt occurs as an arsenide in the ores of the Cobalt Camp, the arsenic contents rise with the cobalt.

At present there is a great call in Cobalt for a metallurgical process for the economical treatment of flotation concentrates, and although a considerable amount of investigation has taken place no satisfactory method of treating this material at the point of production has yet been discovered. Shipments of flotation concentrates will, therefore, continue to the smelters at Denver, although a combined freight and treatment charge of over $24.00 per ton has to be paid.

The flotation process has made important advances during the year, but the uncertainty of the standing of the different flotation patents and the fear of costly litigation similar to that experienced in the United States has undoubtedly retarded expansion. Fortunately, the Canadian patent laws are much more liberal than those of the United States, so that an infringer of a patent in Canada can only be compelled to pay a reasonable royalty for the use of a patent. The mine

operators of Cobalt do not object to paying a reasonable royalty, but they do want the matter settled so that they may know what they have to count on on this score. The Dominion Government has promised to take action and to have a reasonable royalty set.

The total silver production of the Cobalt district up to the end of 1917 is shown in the following table, taken from the Preliminary Report of the Ontario Bureau of Mines:

—	Average Price cents per ounce	Ounces	Value
			$
1904	57.2	206,875	111,887
1905	60.4	2,451,356	1,260,503
1906	66.8	5,401,766	3,667,551
1907	67.5	10,023,311	6,155,391
1908	52.9	19,437,875	9,133,378
1909	51.5	25,897,825	12,461,576
1910	53.5	30,645,181	15,478,047
1911	53.3	31,507,791	15,953,847
1912	60.8	30,243,859	17,408,935
1913	57.8	29,681,975	16,553,981
1914	54.8	25,162,841	12,765,461
1915	49.69	24,746,534	12,135,816
1916	65.661	19,915,090	12,643,175
1917	81.418	19,401,893	16,131,013
Total		274,724,172	151,960,561

The production according to source was as follows:

	Ounces
Cobalt	18,327,258
South Lorrain	10,000
Gowganda	1,064,635
Silver recovered from gold and copper ores	77,914
Total	19,479,807

The leading shipper was the Mining Corporation of Canada with an output of 4,546,065 ounces for the year. Other mines shipping over one million ounces were the Nipissing, Kerr Lake, Crown Reserve, O'Brien, Miller-Lake-O'Brien and McKinley-Darragh. The only new shipper produced during the year was the Adanac.

Among the few shippers of silver ore outside of the Cobalt Camp proper, the Miller-Lake-O'Brien of Gowganda is easily the most important. Last year a most spectacular find was made on this property and this year the favourable development of this discovery has been the means of reviving considerable interest throughout the Gowganda district. It is noticeable, also, that the most active exploiting of the prospectors in this district is being done by some of the best known Cobalt companies, which are using part of their surpluses in this way in an endeavour to increase their mining holdings in the district. This augurs well for the district, as these companies, with their experience gained in Cobalt, would not go into a new district if they did not consider there were good prospects there. That experience will also enable them to work the claims to the best advantage. Among the Cobalt companies adopting this policy are the Mining Corporation of Canada, Crown Reserve, Kerr Lake and LaRose, and we find that some of these companies are also acquiring some excellent gold prospects.

There is such a demand for silver from the allied nations that it now may be considered a war metal and its production a patriotic service. Apart from this the mining companies have taken a leading part in all patriotic work. The assistance given by a number of the mining companies to their employees in helping to increase the output of garden produce was most noteworthy, and was attended with satisfactory results.

GOLD

Gold being the general basis of exchange its value is supposed to remain stationary, no matter how other commodities may fluctuate. If, however, all the necessities of life, such as wheat, increase in value so that an ounce of gold will only buy half the amount that it would buy before the war, then this amounts to a depreciation in the value of gold. This is the plight in which the gold mining industry finds itself at the present time. Not only is the cost of labor going up but all commodities used in the production of gold have gone up, while at the same time there can be no rise in the value of the gold product to effect this increased cost.

In the Porcupine gold area, notwithstanding these adverse conditions, the production for the year amounts to 398,257 ounces, with a value of $8,229,744.

The leading producers with their approximate outputs were:

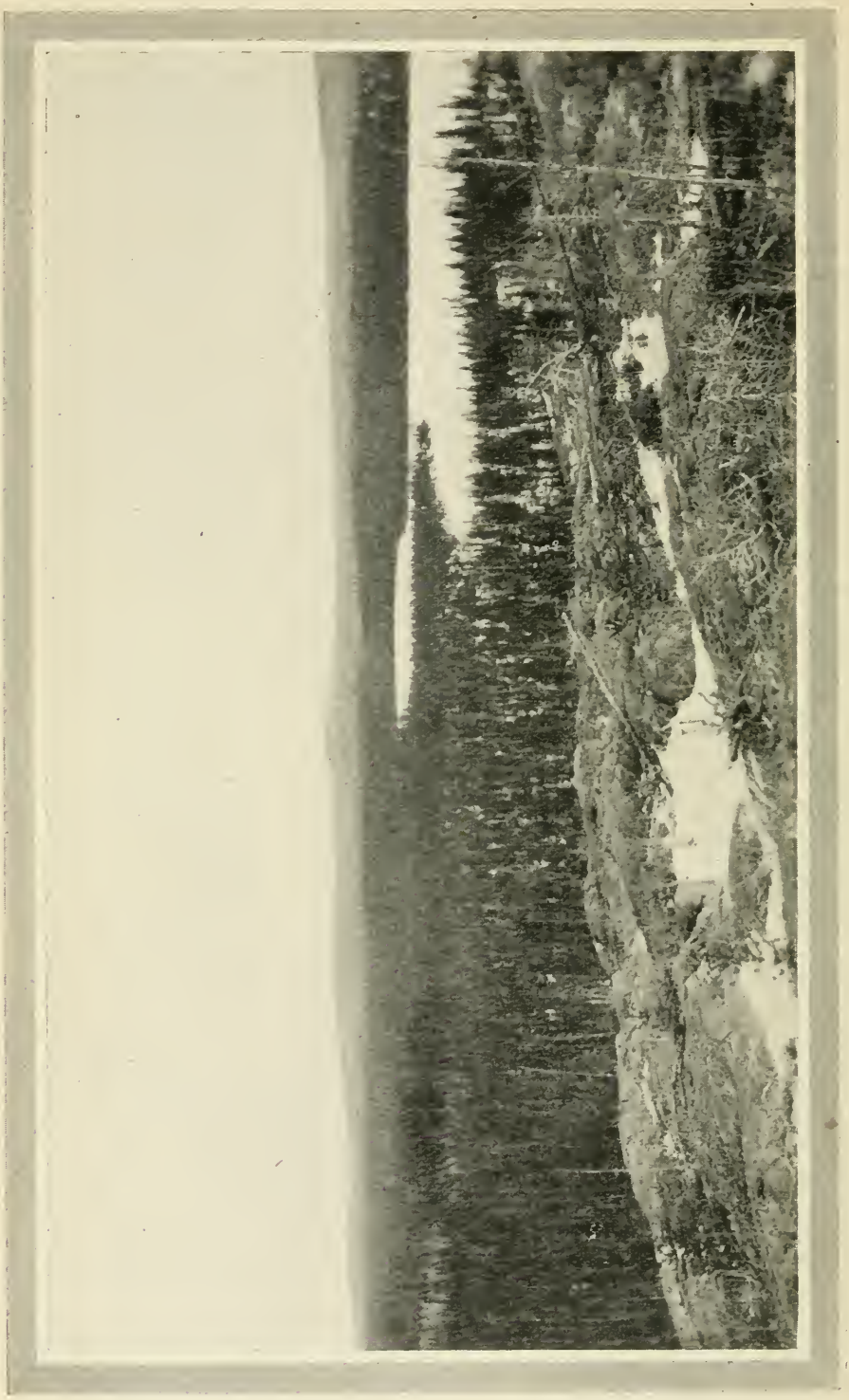
Company	Ore Milled	Gold Recovered	
	Tons	Ounces	Value
			$
Hollinger Cons.	514,301	204,810	4,233,777
McIntyre-Porcupine	175,893	81,827	1,606,126
Dome Mines	359,570	71,193	1,471,705
Porcupine-Crown	39,111	18,180	375,766
Porcupine V.N.T.	34,971	10,416	208,350
Schumacher	37,323	9,551	197,413

In addition to the above small outputs were made by the Dome Lake and Newray.

The favourable deep developments in the McIntyre, Hollinger, Porcupine Crown and Dome Mines, as well as the information gained by deep diamond drill cores tend to show that the ore at depth is of the same character as higher up, and all these indications point to the probability of deep mining at Porcupine.

Outside of the producing mines there have been important working extensions of the camp both north and south. The Ankerite property in northern Deloro, belonging to the Coniagas Mines of Cobalt, has started the sinking of a 500-foot shaft on contract. The Maidens-Macdonald, an adjoining property, has also been bought by the same interests.

Control in the Newray, formerly the Ray property, situated to the north-east of the Pearl Lake group, has been acquired by Crown Reserve and Dominion Reduction interests of Cobalt. This was one of the early discoveries of the Porcupine camp, but owing to lack of sufficient capital the property was never given a thorough testing out. Recent developments indicate that it is likely to become an important producer in the future. A number of claims in northern Tisdale are also being opened up and will be given further prospecting development.



General scene in Lightning River District—Gold finds are located in high ground in the distance—1917.

The Kirkland Lake district ranks next to Porcupine in importance in the gold area. This district was very active during the year, and many new properties have been opened up, extending the probable producing area very materially. The new development has been mostly to the west and south-west of Kirkland Lake.

The following is a list of the most active properties running roughly from west to east:

Canadian Kirkland.
United Kirkland.
Kirkland Lake.
Kirkland Porphyry.
Teck-Hughes.
Minaker Kirkland.
Lake Shore.
Wright-Hargraves.
Aladdin Cobalt.
Tough-Oakes.
Fisher.
Ontario.

The only two producers were the Tough-Oakes and the Teck-Hughes.

Company	Ore Milled	Gold Recovered	
	Tons	Ounces	Value
			$
Tough-Oakes	38,695	16,384	338,593
Teck-Hughes	11,257	3,181	65,753

The Teck-Hughes mill has been doubled in capacity so that it now treats 80 tons per day. The main shaft is being sunk to the 700-foot level. The Lake Shore has developed an ore shoot containing some spectacular ore on the second level under Kirkland Lake, and a cross-cut is now being driven to cut this ore on the 400-foot level. The Lake Shore mill, with capacity of 75 tons per day, started operations in March, 1918.

The Kirkland Lake Gold Mines are sinking a central shaft to the 700-foot level. The foundation for their mill is now complete and the mill is expected to be ready for operation by next September. The Kirkland Porphyry Company also plans a mill for 1918.

Favourable deep developments on the operating properties, particularly on the Kirkland Lake, Teck-Hughes and Lake Shore properties, are of a most encouraging nature and indicate that further extensions to the producing zone are likely to be found extending to the west and south-west of the present operators around Kirkland Lake.

In Munro Township the Croesus Mine has replaced its plant and rebuilt its mill which were wiped out by the devastating fire of 1916. The mill was ready for operation in the spring of 1917, but owing to water troubles in the mine the mill has not been operated continuously. The mill has a 30-40 ton daily capacity, but the company still ships high-grade hand-sorted ore to the smelter.

At Boston Creek the Miller-Independence produced a little gold and the Patricia Syndicate started development.

The Bourkes Mines, Limited, situated near Bourkes Station, in the Township of Benoit, have installed a small plant and have disclosed some spectacular ore in development.

Among the notable gold finds made during the year one in Rickard Township stands out pre-eminently. The original discovery has been acquired by the Mining Corporation of Canada, camps are now being erected and development started. Some spectacular material has already been produced. A very promising find has also been made in the Lightning River district. This is reached either from Ramore Station or by a 30-mile bush road north-east from Kirkland Lake. The ore is quartz in a vein varying from one to five feet in width.

Larder Lake, Powell, Skead and McElroy all show a little activity.

The work that is being done in the gold area is of such a nature as to put the whole industry in better shape for the future and we may expect to see the production steadily increase both by larger output from the present producers and also by the development of prospects into mines. If the gold mining industry can make such progress in the face of present adverse conditions the return to anything like normal conditions in the future can be looked forward to most hopefully.

NICKEL

The Alexo Mine continued to ship nickel ore during the year to the Mond Nickel Company's smelter at Coniston, Ontario. The shipments for the year amounted to 5,604.85 tons.

COPPER

The copper property opened up at Cedar Lake, about 4 miles north of Temagami Station, which was under option to M. J. O'Brien, of the O'Brien Mine, Cobalt, was worked from early in the year to the end of the first week in September. The surface exposure was one of the best copper showings that has been found in this part of the country and from it there was shipped a car and a half assaying as follows:

Gold	.005 Ounces
Silver	1.96 "
Copper	7.95 %
Nickel	6.00 %

A 55-foot shaft was sunk on Claim 1,623 to a depth of about 60 feet, and over 200 feet of cross-cutting and drifting done. At this depth the deposit broke up and became shattered into a number of unworkable stringers with considerable copper pyrites, which was so sparsely disseminated as to be uncommercial.

The veins were found underground to behave very much as the veins found in the Keewatin at Cobalt. Pockets of copper were encountered, but the expense and difficulty of doing further work to determine the existence of any large body of copper ore were considered to be inadvisable, and further work has been abandoned for the present.

MOLYBDENITE

Interest has revived in an occurrence of molybdenite at mileage 76½ and arrangements are being made for further development.

BARITE

Barite is now being worked by the Premier Langmuir Mines, Limited, the only working barite property in Northern Ontario.

Location. The property consists of seven patented claims situated on the southern boundary of the Township of Langmuir, on the east branch of the Night Hawk River. It is 30 miles by water route from Connaught Station on the Porcupine Branch of the T. & N. O. Railway and 6 miles up the Night Hawk River from Night Hawk Lake.

Ore. The vein consists of white barite 5 ft.-10 ft. wide, containing sufficient silver near one wall to make a workable silver ore by sorting. The vein has been traced over 1,000 feet on the surface.

Development. The development work consists of a tunnel run into the hillside 100 feet on the vein and a 50-foot shaft near the portal. Sinking will be continued to 120 feet and at 60 feet a level will be opened up.

Plant. A 150 h.p. boiler runs the 6 x 8 hoist and the engine which will supply the motive power to the mill. No compressor has yet been installed and all drilling is done by hand.

Mill. A mill is now being equipped and is expected to be ready for the production of powdered barite early in the spring. The ore, after passing a (6 in. x 10 in.) jaw crusher, is delivered to shaking screens and then to a picking belt making two products.

(1) The pure barite goes to rotary dryer and then to special pulverizers where it is ground to 200 mesh and packed for shipment.

(2) The silver ore is to be concentrated by a process at present being developed. The finished barite will be transported in scows to Connaught Station for shipment.

FIRE AND POTTERY CLAYS

On a recruiting trip to Moose Factory, Capt. C. M. McCarthy, of Elk Lake, discovered a deposit of clay, samples of which he submitted to the Mines Branch at Ottawa.

The following notes have been supplied by Mr. Joseph Keele, of the Mines Branch:

"A sample of white clay from a bed on the Mattagami River was recently received for examination at the laboratories of the Mines Branch, Ottawa. Capt. C. M. McCarthy, of Elk Lake, the discoverer of the deposit, states that it is situated near the foot of the Long rapid, and is exposed for a length of 700 feet along the bank of the river, and that it is at least 8 feet thick, but continues below the water level. A deposit of similar clay occurs on the same river about 20 miles further north.

"The material is highly refractory, as it does not deform when raised to the temperature of the softening point of standard cone 33 (3,254 deg. F.). This is the first record of the occurrence of a number 1 fire clay in Ontario, and there are few clays as refractory as this in Canada as far as we know at present.

"The working qualities of the clay are good, and the shrinkage in drying and burning are within practical limits. It burns to a white colour at the lower temperature, but when burned to cone 9 (2,390 deg. F.), the temperature at which fire bricks are generally burned in practice, small black specks, probably of iron, develop in the body.

"An analysis by W. K. McNeil shows the chemical composition of the clay, and the small amount of fluxing impurities it contains:

Silica	53.10
Alumina	31.98
Iron	1.52
Lime	.51
Magnesia	trace
Soda	.54
Potash	.28
Ignition Loss	12.35

"When the clay is mixed with an excess of water and washed through a 200-mesh screen, about 20 per cent. of fine quartz sand remains behind.

"The fine washed clay was made up into a standard porcelain body having the following composition:

Washed Mattagami clay	50 per cent.
Ground feldspar	20 "
Ground quartz	30 "

"Test pieces of this composition were burned in a china kiln to cone 10, and afterwards glazed and refined. These pieces had a beautiful ivory tone, but were not suitable for commercial china or semi-porcelain wares where a white colour is strictly required. The clay could be used, however, in making sanitary porcelain, vitrified floor tiles and wall tiles. Much of the china clay imported for these purposes has not as good colour as the Mettagami clay, and a little cobalt stain added to the latter would materially improve the colour.

"A similar white clay occurs on the Missinabi and Wabiskagami Rivers, but which seems to be more sandy in texture than the Mattagami clay. This occurrence was described in 1890 by Mr. E. B. Borron, in the Bureau of Mines Report of Ontario.

"These clay deposits are of great geological interest, as they are probably of Tertiary age. They are certainly pre-glacial deposits."

FUEL IN NORTHERN ONTARIO

What would happen to Ontario if the United States should issue an embargo on the shipment of coal to Canada? In less than six months many parts of the country would be reduced to a worse physical plight than present-day Belgium. Many of our industrial establishments are working on a one month's fuel reserve, while some only have a two weeks' supply ahead. The Province of Ontario is absolutely dependent on the United States for its fuel supply. Last winter, owing to labour conditions and car shortage, we narrowly averted the very serious consequences of a coal famine. This year the United States coal mines produced more coal, but the demand has increased much faster than the supply with the result that there is a large shortage. During the winter 1917-18 we were receiving daily reports of coal shortage from many parts of Ontario and this condition is likely to become worse before spring. Looking into the future, too, we cannot hope for much better conditions, and it is, therefore, not only a possibility, but a probability that the United States, on account of her own pressing needs, will have to materially restrict her coal shipments coming into Ontario. It, therefore, behooves us to find what possible substitutes we have for coal in Ontario, and in this connection conditions in Northern Ontario may be considered typical of the rest of the Province.

Along the Temiskaming and Northern Ontario Railway our industries are practically dependent on American coal for their continued operation. During

the twelve months ending September 30th, 1917, there was imported to T. & N. O. Railway points, exclusive of the coal used by the railway, 19,802 tons of anthracite coal, and 102,752 tons of bituminous coal. If this supply were even partially cut off what substitute could we obtain?

Wood. Hardwood forests occur north of North Bay for a distance of about 40 miles, but the high cost of taking this material out and the long railway haul to a market from a minimum of 60 miles to Cobalt to a maximum of over 200 miles to Cochrane, practically precludes the use of hardwood as a commercial fuel.

The soft woods along the railway are used at present to supply a certain amount of the domestic fuel, but as time goes on the cost continues to rise and this commodity is becoming more scarce. In a few isolated places small mining plants situated in the thick bush, and at a distance from the railway, find it feasible to use wood for the generation of power, but even a small plant will clear the wood from an ordinary lot in less than two years and then the cost goes up. The extension of the use of softwood cannot, therefore, be much counted on.

Hydro-Electric Power. In the initial stages of the development of the Cobalt Camp wood was the fuel most extensively used, but coal was so readily brought in by rail that it soon replaced the wood at the mines. By the time hydro-electric power was developed and brought into the Camp the boiler capacity of the mining plants was more than 10,000 h.p. At this time the coal shipments had reached 150,000 tons to Cobalt, but the introduction of hydro-electric power was the means of cutting down the coal shipments to 30 per cent. of what they had previously been. Coal had still to be used for heating purposes.

To supply the Cobalt Camp three power plants were developed on the Montreal River, and one on the Matabitchewan River. Two plants on the Mattagami River supply power to the Porcupine Camp and a 22,000 h.p. development on the Abitibi takes care of the power needs of the Abitibi Power and Paper Company at Iroquois Falls. The power from these plants is being utilized at present to almost full capacity with the exception of one plant at Cobalt, which is operated for the most part as an auxiliary in case of a tie up of any of the other Cobalt plants. Little help need, therefore, be looked for from these plants at the present time. If hydro-electric power is to relieve us from a possible coal famine it must, to a large extent, be by new power developments. Fortunately, there are a number of large water-powers in the district which are still undeveloped, the largest being on the Quinzes River at the head of Lake Temiskaming.

Peat. Peat as a fuel has been known and used for many years in Europe, but in Canada its production has never been a serious competitor with coal. With the large increase in the cost of coal to the consumer, peat as a fuel now becomes a possibility, and with the likelihood of a coal famine before us peat fuel becomes a probability. Peat bogs are known to occur at many points along the T. & N. O. Railway from mileage 38 to Cochrane, some of them having an area of several thousand acres. Samples of some of these peat bogs were sent to Ottawa where they were found to have a very satisfactory calorific value. In order to have an expert opinion on these peat bogs Mr. A. Anrep, Peat Expert for the Dominion Government, was sent up from Ottawa, and during the ten days from 20th October to 1st November, 1917, made a preliminary investigation of the peat bogs in the vicinity of Cochrane. Mr. Anrep reported as follows:

Cochrane Peat Bog.

The total area of the Cochrane Peat Bog has not been ascertained, as the investigation in that section commenced late in the season, and only a very short time

was available. During that period the approximate quality and depth were determined.

The Cochrane Peat Bog is situated about one mile south of Cochrane Station, in Lamarche Township, probably continuing into St. John and Hanna Townships, County of Temiskaming, Ontario, and runs in a north and south direction. The part of the area investigated covers approximately more or less of:

Lots 5 and 6, Con. IV., Township of Lamarche
Lots 4, 5 and 6, Con. V., " " "
Lots 3 to 6, Con. VI., " " "

The total area of the bog of which a preliminary investigation was made is approximately 1,400 acres.

Approximately 100 acres have a depth of less than 5 feet, assuming an average depth of 4 feet (615,000 cubic yards).

Approximately 200 acres have a depth of more than 5 feet, assuming an average depth of 8 feet (2,696,000 cubic yards).

Approximately 960 acres have a depth of more than 10 feet, assuming an average depth of 13 feet (20,000,000 cubic yards).

Approximately 80 acres have a depth of more than 15 feet, assuming an average depth of 16 feet (2,161,000 cubic yards).

Approximately 60 acres have a depth of more than 20 feet, assuming an average depth of 21 feet (2,141,000 cubic yards).

The portion of the bog which is situated more or less adjacent to the railway track of the Temiskaming and Northern Ontario Railway, between the mileage 249 and 250, is fairly well suited for the manufacture of machine peat. Following the margin of the bog for a few thousand feet in a northerly direction the peat is well humified and is of considerable depth. This part of the bog is very heavily wooded with dwarf spruce. Towards the centre of this part of the bog, in the south half of lot 4, Con. V, the depth increases considerably, and the peat is less humified, which makes it less suitable for the manufacture of peat fuel. However, if this part is properly drained it will gradually humify, and by the time the well humified peat from the margin of the bog is utilized, and worked towards the centre, that portion which is situated in the centre and which is poorly humified at present will have become suitable for the manufacture of peat fuel.

The peat in the remaining portion of the bog is less humified than the peat following the margin of the bog, but as soon as the whole bog is properly drained the peat will undergo a desirable change: that is the vegetable matter will come into direct contact with the air, the plants will become oxidized, and in a comparatively short time the peat will undergo humification and become fairly suitable for the manufacture of fuel. However, such a change will only set in rapidly if the peat is composed of carex, eriophorum or hyphum, but if it is composed mainly of sphagnum mosses the humification process is much slower.

During the latter part of October, when making a preliminary investigation of this area, the surface of the bog was practically submerged by water. This condition would be much worse in the spring. To eliminate this difficulty the bog must be properly drained before any rational manufacture of peat fuel can be undertaken.

During the drilling it was found that the peat was composed mainly of carex and eriophorum plants, the upper layer of a thickness of from 1-3 feet is mostly composed of sphagnum mosses, lightly intermixed with carex and eriophorum plants.

The following analyses were made from the samples obtained by Mr. A. A. Cole:

Four samples were taken from mileage 249½, two at 243 and three at 240 at various depths shown in the following table:

Sample No.	Bog Mileage	Depth in feet	Moisture on Sample as received	Calorific values Calories	Dried Sample B.T.U.
1	249½	6	88.2	5,290	9,530
2	"	7	88.5	5,130	9,240
3	"	9	89.8	5,190	9,340
4	"	14	89.4	4,970	8,950
5	243	3	84.9	5,090	9,170
6	"	6	87.8	4,880	8,790
7	240	2	81.9	5,140	9,250
8	"	4	85.4	4,720	8,500
9	"	6	85.8	4,650	8,380

From the above it is noticeable that sample 4, taken from the bottom layer at mileage 249½ has a slightly lower calorific value than the higher layers, but that is due to the fact that a certain amount of foreign matter from the bottom of the bog had entered into the peat sample, which must have increased the ash content.

The preliminary investigation of the bogs south of Cochrane, on the T. & N. O. Railway, was made during the same period, and from these investigations it could be gathered that these bogs are less suitable for immediate manufacture of peat fuel than the Cochrane bog, unless the peat were to be converted into peat powder fuel.

Drill holes were made at the following mileage: Mileage 243 indicates an average depth of 5-8 feet containing a quality B+ average, that is, peat fairly well suited for the manufacture of peat fuel. The analysis of the peat taken from this bog is shown in above tabulation (samples 5 and 6).

Mileage 240 indicates an average depth of 5-7 feet, containing a quality of B to B+, that is peat fairly well suited for the manufacture of fuel. Samples 7, 8 and 9 are from this bog.

The moisture content of all the above samples is determined as the peat was received at the laboratory.

Mileage 239 indicates an average depth of 5-6 feet, containing a quality of B+ to B—, that is, peat very well suited for the manufacture of fuel.

The formation of these bogs is very similar to the bog near Cochrane. The disadvantages of these peat areas lie in the fact that the surface is very heavily timbered, the clearing of which would involve a great expenditure at present, and also the depth of the peat is inconsiderable, as it must also be taken into consideration that after drainage the depth would decrease 2 feet.

It is very difficult to determine the correct depth of a bog when only a few drillings have been made, therefore the writer suggested to the Honourable Mr. Ferguson, Minister of Mines, Toronto, and to Mr. A. A. Cole, Mining Engineer, Cobalt, that the investigation of the peat area between North Bay-Cobalt, Cobalt-Cochrane, be continued on systematic lines. This advice has been accepted and the peat areas are already under way to be properly surveyed and drilled. The writer begs also to suggest that, keeping in mind the object of the development in the near future of the peat bogs, it would be advisable that minimum areas of bogs of known value as to quality, location and railway facilities should be secured, and such drainage and clearing be done as is necessary to permit of the manufacture of peat fuel. These suitable areas will be available for private interests to purchase, or lease, or, if necessary, retained by the Government, as under existing circum-

stances it is not likely that private capital will have the inclination or foresight to prepare such areas. If such steps for the preparation of the peat areas be taken, a great deal of delay in connection with the preparation of the peat areas will be eliminated.

It must also be borne in mind that the bog at Cochrane has a very high calorific value: still certain portions of the bogs are not suitable for the manufacture of a very high grade of domestic fuel, as the peat is not sufficiently humified, and lacks cohesive properties. For this reason the writer advised that the output of peat be increased in the near future, and that the plant be combined with a peat powder plant, and the product used for industrial purposes instead of for domestic use, as, according to analysis, the fuel contained a very satisfactory calorific value. This suggestion was based on the knowledge that in Sweden there are several large peat powder plants in operation, and that the State Railway between Stockholm and Ringby uses peat powder as its only motive power.

Ontario obtains all her coal from the United States. With the enormous increase in industrial development in the United States, due principally to war work, it is becoming increasingly difficult for them to supply even their own demands for coal. If this condition of affairs continues, the day cannot be far distant when we will be warned to provide for our own fuel requirements, at least to a much greater extent than at present. Our chief hope of being able to do so is in the further development of hydro-electric power with the further assistance of the production of peat for fuel. At best it will require several years' work to adequately prepare our water powers and our peat bogs to meet this emergency.

Tenth Annual Report

OF THE

HYDRO-ELECTRIC POWER COMMISSION

OF THE

PROVINCE OF ONTARIO

FOR THE YEAR ENDED OCTOBER 31st

1917

VOLUME I.

PRINTED BY ORDER OF

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To His Honour, Colonel Sir John Hendrie, K.C.M.G., C.V.O.,

Lieutenant-Governor of Ontario.

May it Please Your Honour:

The undersigned has the honour to present to Your Honour the Tenth Annual Report of the Hydro-Electric Power Commission of Ontario for the fiscal year ending October 31st, 1917.

Respectfully submitted,

Adam Beck,

Chairman.

TORONTO, ONT., February 12th, 1918.

COLONEL SIR ADAM BECK, K.B., LL.D.,

Chairman, Hydro-Electric Power Commission of Ontario,

Toronto, Ont.

SIR,—I have the honour to transmit herewith the Tenth Annual Report of the Hydro-Electric Power Commission of Ontario for the fiscal year ending October 31st, 1917.

I have the honour to be,

Sir,

Your obedient servant,

W. W. POPE,

Secretary.

HYDRO-ELECTRIC POWER COMMISSION OF ONTARIO

COLONEL SIR ADAM BECK, K.B., LL.D.

HONOURABLE I. B. LUCAS, M.P.P.

COLONEL W. K. McNAUGHT, C.M.G.

W. W. POPE, Secretary.

F. A. GABY, Chief Engineer.

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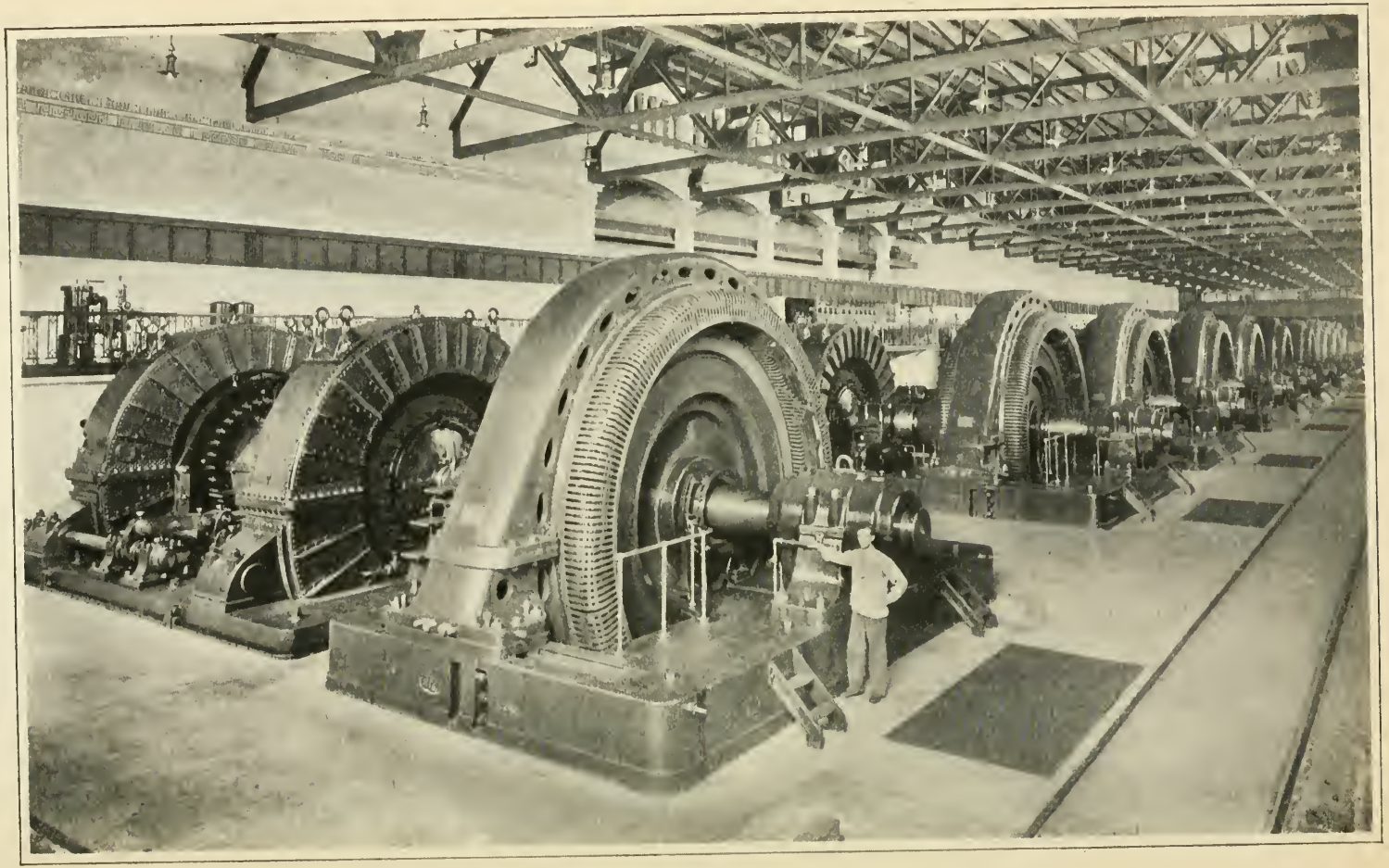


An Interior View of the Ontario Power Company's Generating Station

TENTH ANNUAL REPORT

OF THE

Hydro-Electric Power Commission of Ontario

SECTION I

LEGAL PROCEEDINGS

ACTS

The following Act to amend *The Power Commission Act* and to confirm certain by-laws and contracts was passed by the Legislature of the Province of Ontario during the Session of 1917.

An Act to amend *The Power Commission Act* and to confirm Certain By-laws and Contracts.

Assented to 12th April, 1917.

HIS MAJESTY, by and with the advice and consent of the Legislative Assembly of the Province of Ontario, enacts as follows:—

1. This Act may be cited as *The Power Commission Act, 1917.* Short title.

2. Section 6*a* of *The Power Commission Act* as enacted by section 4 of *The Power Commission Act, 1916,* is amended as follows:— Rev. Stat. c. 39, s. 6a (6 Geo. V. c. 19, s. 4) amended.

(*a*) Subsection 1.—By adding at the commencement thereof the words "The Commission, with the approval of." Appointment of comptroller.

(*b*) Subsection 2.—By striking out the word "shall" in the first line and substituting therefor the word "may" and by adding after the word "proper" in the second line the words "and as the Commission may approve," and by striking out the words "Lieutenant-Governor in Council" in the sixth, eleventh and twelfth lines and substituting therefor the word "Commission." Books and accounts.

(*c*) Subsection 5.—By striking out the words "Lieutenant-Governor in Council" in the second line and substituting therefor the words "the Commission with the approval of the Lieutenant-Governor in Council." Vacancy in office.

(*d*) Subsection 7.—By inserting after the word "by" in the second line the words "the Commission, with the approval of." Salary.

Rev. Stat. c. 39, s. 8, amended.

3. Section 8 of *The Power Commission Act* is amended by adding thereto the following clauses:—

Acquiring stock in development companies.

(*g*) Acquire by purchase or otherwise on any terms and hold shares in any incorporated company carrying on the business of developing, supplying or transmitting electrical power or energy; and in connection with any such acquisition enter into any covenant or covenants, agreement or agreements, and pay for any such shares either in cash or bonds, debentures or other securities of the Commission, and guarantee, or covenant or agree for or in respect of the payment or performance of any bonds, debentures, securities, contracts or obligations of any company shares in which are so acquired, or of any company shares in which are held by any company in which shares are so acquired.

Issue of bonds, etc., to pay for shares.

(*h*) Issue bonds, debentures or other securities of the Commission for any of the purposes set out in clauses *a* to *g* in such form and containing such terms and at such rate of interest and payable in such manner and at such time or times as the Lieutenant-Governor in Council may determine.

Rev. Stat. c. 39, amended.

4. *The Power Commission Act* is amended by adding thereto the following section:—

Lands of Commission to be taxable.

Rev. Stat. c. 195.

12*a*.—(1) Notwithstanding anything in *The Assessment Act* contained, land owned by and vested in the Commission shall be subject to assessment and taxation for municipal and school purposes at the actual value thereof according to the average value of the land in the locality.

Buildings, works, etc., to continue to be exempt.

(2) Subsection 1 shall not apply to or include buildings, machinery, works, structures, substructures, superstructures, rails, ties, poles and other property, works or improvements owned, used or controlled by the Commission, nor an easement or the right of use or occupation or other interest in land not owned by the Commission, but all such buildings, machinery, works, structures, substructures, superstructures, rails, ties, poles and other property, works or improvements owned, used or controlled by the Commission, and every such easement or right, shall continue to be exempt from assessment and taxation as heretofore.

Rev. Stat. c. 39, amended.

5. *The Power Commission Act* is amended by adding thereto the following sections:—

Guaranteeing bonds of Commission.

14.—(*c*) The Lieutenant-Governor in Council is hereby authorized, on such terms as may be approved by Order-in-Council, to agree to guarantee the payment of the principal and interest of any bonds, debentures and other securities issued by the

Commission, and the form and manner of any such guarantee or guarantees shall be such as the Lieutenant-Governor in Council may approve. The said guarantee or guarantees shall be signed by the Provincial Treasurer or such other officer or officers as may be designated by the Lieutenant-Governor in Council, and upon being so signed, the Province of Ontario shall become liable for the payment of the principal and interest of the bonds, debentures and securities guaranteed according to the tenor thereof, and the Lieutenant-Governor in Council is hereby authorized to make arrangements for supplying the money necessary to fulfil the requirements of the said guarantee or guarantees, and to advance the amount necessary for that purpose out of the public funds of the Province, and in the hands of any holder of or of any of such bonds, debentures or securities any guarantee so signed shall be conclusive evidence that the terms of this section have been complied with.

Guaranteeing performance of contract for purchase of shares.

14.—(*d*) The Lieutenant-Governor in Council is hereby further authorized on behalf of the Province of Ontario to enter into any covenants or agreements in connection with the acquisition by the Commission of any shares in any incorporated company and to guarantee the observance and performance by the Commission of any contract or agreement of the Commission in relation to such acquisition.

Rev. Stat. c. 39, s. 18, amended.

6. Subsection 8 of section 18 of *The Power Commission Act,* as enacted by section 9 of *The Power Commission Act, 1916,* is repealed, and the following substituted therefor:—

Debentures of municipality not to be included in calculating limit of indebtedness.

(8) Notwithstanding anything in *The Municipal Act* or any general or special Act contained, debentures issued, or purporting to be issued by a municipal corporation which has entered into a contract with the Commission for a supply of electrical power or energy from the Commission for the purpose of carrying out such contract, or for constructing or equipping works for the development, transmission and distribution of electrical power or energy so supplied, shall not be included in ascertaining the limits of the borrowing powers of the corporation as prescribed by *The Municipal Act,* or such other general or special Act.

Rev. Stat. c. 19, s. 2.

Rev. Stat. c. 39, s. 19, amended.

7.—(1) Section 19 of *The Power Commission Act* is amended by adding thereto the following subsection:—

Extension, etc., of works in police village.

(4) Where the trustees of a police village have entered into a contract with the Commission for the supply of electrical power or energy and have heretofore constructed, purchased or acquired or hereafter construct, purchase or acquire works for distributing electrical power or energy, and the trustees of

the police village desire to extend or improve such works, they may apply to the council of the township for the passing of a by-law for the issue of debentures for such extension or improvement, and the council may pass the necessary by-law for borrowing such further sums as may be necessary for such extension or improvement and for levying by an annual special rate upon the rateable property in the police village, the sums required for the payment of the debentures issued for the extension or improvements.

Assent of electors not required.

(*a*) The by-law shall be approved by the Commission before the final passing thereof, but shall not require the assent of the electors.

Approval of Commission.

(*b*) Such approval may be given if it is shown to the satisfaction of the Commission that the extension is necessary or desirable and if sufficient additional revenue will be derived therefrom to meet the annual payments in respect of the debt and the interest thereon.

5 Geo. V, c. 34, s. 39, repealed.

(2) Section 518*a* of *The Municipal Act* as enacted by section 39 of *The Municipal Amendment Act, 1915,* is repealed.

Rev. Stat. c. 39, amended.

8. *The Power Commission Act* is amended by adding thereto the following section:—

Township distribution works.

19*a*.—(1) Notwithstanding anything in *The Public Utilities Act* or any other Act contained, the council of a township may pass by-laws:—

Lands and works.

(*a*) for acquiring lands and real and personal property, and erecting, constructing and operating works for the development, transmission and distribution of electrical power or energy in the municipality;

Contract with Commission.

General powers.

(*b*) for entering into a contract with the Commission with the assent of the municipal electors of the township qualified to vote on money by-laws, for the supply of electrical power or energy for the use of the municipality and the inhabitants thereof;

Rev. Stat. cc. 192, 193, 204.

(*c*) for exercising for the said purposes, any of the powers which may be exercised by the municipal council of a town under the authority of *The Municipal Act, The Local Improvement Act, The Public Utilities Act* or this Act.

Sectional township by-laws.

(2) The council of a township may by by-law set apart a portion of the township as to which any of the by-laws passed under subsection 1 may have effect, and may submit the by-law for

the establishment of such works, or for entering into such contract, to the municipal electors qualified to vote on money by-laws in the part of the township so set apart.

Debentures.

(3) Where the council has passed a by-law under subsection 2, the council may issue debentures for the purposes set out in subsection 1, and levy the special rate for the amounts required to be raised on account of sinking fund and interest for the payment of the said debentures, in the district so set apart.

Commission for control and management.

(4) The council may appoint a commission for the purpose of the construction of the works and the control and management of the same for the district so set apart in the manner provided by section 34 of *The Public Utilities Act*, but the commissioners appointed shall be residents of such district and it shall not be necessary to obtain the assent of the electors to the establishment of the Commission.

Rev. Stat. c. 204.

9. *The Power Commission Act* is amended by adding thereto the following section:— Rev. Stat. c. 39, amended.

Debentures for extension or improvement not to be issued without approval of Commission.

24*a*.—(1) A municipal corporation which has entered into a contract with the Commission for the supply of electrical power or energy shall not pass any by-law for the issue of debentures for any extension or improvement to an electrical light, heat or power system without having first obtained the assent of the Commission to the amount of such issue and the purposes to which the same is to be applied.

Liability of members of council.

(2) Every member of the council of the municipal corporation passing a by-law in contravention of subsection 1 shall be personally responsible for any loss or expense occasioned to the corporation by such action unless he shows that he voted against the passing of such by-law or did everything in his power to prevent the passing of the same.

By-law to be void.

(3) Every by-law passed in contravention of subsection 1 shall be illegal and void and the Commission may take the same proceedings for quashing such by-law or restraining the corporation from issuing debentures thereunder as might be taken by a ratepayer of the municipality.

Section to have effect notwithstanding other enactments.

(4) This section shall have effect, notwithstanding the provisions of any other general or special Act heretofore enacted relating to any municipal corporation.

Rev. Stat. c. 39, s. 39, amended.

10. Section 39 of *The Power Commission Act* is amended by inserting therein, after the clause lettered (*a*), the following:—

Application of surplus funds in erection of office buildings.

(*aa*) In purchasing or otherwise acquiring a site and erecting thereon buildings for the occupation and use of the municipal commission as offices and for other business purposes, subject to the approval by the Commission of the site and cost and of the plans of any such building.

Erecting larger building than required and leasing part for other utilities.

(i) Subject to such approval, any such office building may be larger than is required for the immediate use of the Municipal commission and any part of such building not immediately required for the use of the municipal commission may be leased by it to the corporation or to any other municipal commission for the purposes of any public utility in the municipality.

5 Geo. V, c. 19, s. 14, ss. 3, amended.

11. Subsection 3 of section 14 of *The Power Commission Act, 1915,* is amended by adding at the end thereof the following words, "and the Commission may take the same proceedings in respect thereto as might be taken by a ratepayer of such municipality."

6 Geo. V, c. 19, s. 10, ss. 5, amended.

12. Subsection 5 of section 10 of *The Power Commission Act, 1916,* is amended by striking out the figure "7" in the last line thereof and substituting therefor the figure "9."

6 Geo. V, c. 19, s. 12, repealed.

13. Section 12 of *The Power Commission Act, 1916,* is repealed and the following substituted therefor:—

Collection of moneys from municipalities on sinking fund account.

12. Notwithstanding anything in *The Power Commission Act* contained, a municipal corporation which has entered into or shall hereafter enter into a contract with the Commission for a supply of power may be relieved by the Commission from payment of any sum on account of the sinking fund account for the first five years, during which payments are made to the Commission by the corporation under such contract, and the amounts required from such corporation on sinking fund account shall be payable during the then next ensuing thirty years.

Municipal corporations added as parties to contract of 1909.

14. The Municipal Corporation of the City of Sarnia, the Municipal Corporation of the Town of Dunnville, the Municipal Corporation of the Town of Forest, the Municipal Corporation of the Village of Point Edward, the Municipal Corporation of the Village of Rodney, the Municipal Corporation of the Village of Watford, the Municipal Corporation of the Village of West Lorne, the Municipal Corporation of the Village of Wyoming, the Municipal Corporation of the Police Village of Dashwood, the Municipal Corporation of the Police Village of Highgate, the Municipal Corporation of the Police Village of Zurich, the Municipal Corporation of the Police Village of Otterville, the Municipal Corpora-

tion of the Police Village of Dublin, the Municipal Corporation of the Police Village of St. Jacobs, the Municipal Corporation of the Police Village of Burgessville and the Municipal Corporation of the Police Village of Springfield are added as parties to the second part of the contract set out in Schedule "A" to *The Power Commission Act, 1909,* as varied, confirmed and amended by the said Act, and as further varied, confirmed and amended by the Act passed in the tenth year of the reign of His late Majesty King Edward VII, chaptered 16, and by subsequent Acts and by this Act, and the said contract shall be binding upon the parties thereto, respectively, as to the City of Sarnia, from the 10th day of February, 1916; as to the Town of Dunnville, from the 10th day of October, 1916; as to the Town of Forest, from the 7th day of October, 1916; as to the Village of Point Edward, from the 10th day of October, 1916; as to the Village of Rodney, from the 7th day of August, 1916; as to the Village of Watford, from the 2nd day of October, 1916; as to the Village of West Lorne, from the 9th day of September, 1916; as to the Village of Wyoming, from the 10th day of February, 1916; as to the Police Village of Dashwood, from the 23rd day of February, 1917; as to the Police Village of Highgate, from the 16th day of May, 1916; as to the Police Village of Zurich, from the 1st day of March, 1917; as to the Police Village of Otterville, from the 13th day of December, 1915; as to the Police Village of Dublin, from the 27th day of November, 1916; as to the Police Village of St. Jacobs, from the 5th day of February, 1917; as to the Police Village of Burgessville, from the 22nd day of November, 1916; and as to the Police Village of Springfield, from the 15th day of November, 1916.

Added to Schedule "B" to contract.

15. The names of the said municipal corporations are added to Schedule "B" of the said contract, and such schedule shall be read as containing the particulars set out in Schedule "A" to this Act.

Contracts with Town of Collingwood, etc., confirmed.

16. The contracts set out in Schedule "B" hereto between the Hydro-Electric Power Commission of Ontario and the Municipal Corporation of the Town of Collingwood from the 17th day of February, 1917; the Municipal Corporation of the Town of Midland, from the 14th day of February, 1917; the Municipal Corporation of the Town of Penetanguishene, from the 19th day of February, 1917; the Municipal Corporation of the Town of Stayner, from the 16th day of February, 1917; the Municipal Corporation of the Town of Barrie, from the 19th day of March, 1917; the Municipal Corporation of the Village of Creemore, from the 15th day of February, 1917; the Municipal Corporation of the Village of Coldwater, from the 20th day of February, 1917; the Municipal Corporation of the Police Village of Elmvale, from the 15th day of February, 1917, and the Municipal Corporation of the Township of Tay, from the 27th day of February, 1917, are hereby confirmed and declared to be legal and binding upon the parties thereto, respectively, from their respective dates, and shall not be open to question upon any grounds whatsoever, notwithstanding the requirements of *The Power Commission Act,* or the amendments thereto or any other statute.

Rev. Stat. c. 39.

Contracts with certain townships confirmed.

17. The contracts set out in Schedule "C" hereto between the Hydro-Electric Power Commission of Ontario and the Municipal Corporation of the Township of Scarborough, from the 4th day of January, 1917; the Municipal Corporation of the Township of Vaughan, from the 2nd day of October, 1916; the Municipal Corporation of the Township of Townsend, from the 15th day of December, 1916; the Municipal Corporation of the Township of Dereham, from the 17th day of October, 1916; the Municipal Corporation of the Township of South Norwich, from the 23rd day of October, 1916; the Municipal Corporation of the Township of North Norwich, from the 23rd day of October, 1916; the Municipal Corporation of the Township of Chinguacousy, from the 20th day of November, 1916; the Municipal Corporation of the Township of Biddulph, from the 15th day of November, 1916; the Municipal Corporation of the Township of Brantford, from the 4th day of October, 1915; the Municipal Corporation of the Township of Stamford, from the 12th day of March, 1916, are hereby confirmed and declared to be legal, valid and binding upon the parties hereto, respectively, from their respective dates, and shall not be open to question upon any grounds whatsoever, notwithstanding the requirements of *The Power Commission Act,* or amendments thereto, or any other statute.

Other contracts confirmed.

18. The contracts set out in Schedule "D," "E," "F," "G," "H," "I" and "J" hereto between the Hydro-Electric Power Commission of Ontario and the Municipal Corporation of the City of Kingston, from the 4th day of December, 1916; the Municipal Corporation of the Town of Arthur, from the 2nd day of June, 1916; the Municipal Corporation of the Village of Tara, from the 13th day of March, 1916; the Municipal Corporation of the Village of Grand Valley, from the 5th day of June, 1916; the Municipal Corporation of the Township of Artemesia, from the 18th day of February, 1916; the Municipal Corporation of the Township of Brant, from the 6th day of November, 1916, and the Municipal Corporation of the Township of Bentinck, from the 11th day of November, 1916, are hereby confirmed and declared to be legal, valid and binding upon the parties thereto respectively, from their respective dates, and shall not be open to question upon any grounds whatsoever, notwithstanding the requirements of *The Power Commission Act,* or the amendments thereto or any other statute.

Municipal by-laws confirmed.

19. By-laws Nos. 889 and 894 of the Corporation of the City of Sarnia; By-law No. 45 of the Corporation of the City of Kingston; By-laws Nos. 15 and 14 of the Corporation of the Town of Dunnville; By-law No. 461 of the Corporation of the Town of Forest; By-laws Nos. 605 and 607 of the Corporation of the Town of Arthur; By-law No. 873 of the Corporation of the Town of Collingwood; By-law No. 949 of the Corporation of the Town of Midland; By-law No. 535 of the Corporation of the Town of Penetanguishene; By-law No. 540 of the Corporation of the Town of Stayner; By-law No. 905 of the Corporation of the Town of Barrie; By-laws Nos. 282 and 284 of the Corporation of the Village of Tara; By-laws Nos. 187 and 192 of the Corporation of the Village of

Grand Valley; By-laws Nos. 631 and 632 of the Corporation of the Village of Point Edward; By-laws Nos. 115 and 117 of the Corporation of the Village of Rodney; By-laws Nos. 6 and 8 of the Village of Watford; By-laws Nos. 126 and 127 of the Corporation of the Village of West Lorne; By-laws Nos. 307 and 310 of the Corporation of the Village of Wyoming; By-law No. 286 of the Corporation of the Village of Creemore; By-law No. 75 of the Corporation of the Village of Coldwater; By-laws Nos. 189 and 227 of the Corporation of the Police Village of Dashwood; By-laws Nos. 575 and 576 of the Corporation of the Police Village of Highgate; By-laws Nos. 8 and 9 of the Corporation of the Police Village of Zurich; By-laws Nos. 582 and 583 of the Corporation of the Police Village of Otterville; By-laws Nos. 161 and 163 of the Corporation of the Police Village of Dublin; By-law No. 649 of the Corporation of the Police Village of St. Jacobs; By-laws Nos. 760 and 766 of the Corporation of the Police Village of Burgessville; By-laws Nos. 244 and 253 of the Corporation of the Police Village of Springfield; By-law No. 772 of the Corporation of the Police Village of Elmvale; By-laws No. 29 and 30 of the Corporation of the Township of Artemesia; By-law No. 7 of the Corporation of the Township of Bentinck; By-law No. 89 of the Corporation of the Township of Brant; By-law No. 597 of the Corporation of the Township of Tay; By-laws Nos. 925 and 932 of the Corporation of the Township of Scarboro; By-law No. 982 of the Corporation of the Township of Vaughan; By-law No. 350 of the Corporation of the Township of Townsend; By-law No. 720 of the Corporation of the Township of Dereham; By-law No. 597 of the Corporation of the Township of South Norwich; By-law No. 771 of the Corporation of the Township of North Norwich; By-law No. 470 of the Corporation of the Township of Chinguacousy; By-law No. 8 of the Corporation of the Township of Biddulph; By-law No. 698 of the Corporation of the Township of Brantford; By-laws Nos. 23 and 24 of the Township of Stamford are confirmed and declared to be legal, valid and binding upon such corporations and the ratepayers thereof, respectively, and shall not be open to question upon any grounds whatsoever, notwithstanding the requirements of *The Power Commission Act,* or the amendments thereto or of any other statute. Rev. Stat. c. 39.

SCHEDULE "A."

Name of Municipal Corporation.	Quantity of Power applied for in H.P.	Maximum Price of Power at Niagara Falls.	No. of Volts.	Estimate maximum cost of power ready for distribution in Municipality.	Estimate proportionate part of cost to construct transmission line, transformer stations and works for nominally 30,000 H.P., with total capacity of 60,000 H.P.	Estimate proportionate part of line loss and of part cost to operate, maintain, repair, renew and insure transmission line, transformer stations and works for nominally 30,000 H.P., with total capacity of 60,000 H.P.
				$ c.	$ c.	$ c.
Dashwood	50	....	....	56 75	19,016 00	1,144 00
Highgate	50	....	....	51 82	18,415 00	975 00
Zurich	50	....	....	69 34	24,224 00	1,419 00
Otterville	50	....	....	45 00	15,142 00	894 00
Dublin	50	....	....	47 91	17,306 00	889 00
Point Edward	200	....	....	Supplied by Sarnia.		
Dunnville	300	....	....	27 77	44,220 00	2,727 00
Rodney	50	....	4,000	63 00	23,661 00	1,399 00
Forest	100	....	....	63 27	46,985 00	2,404 00
Sarnia	1,500	....	....	38 00	382,755 00	20,061 00
St. Jacobs	35	....	....	42 18	10,243 00	531 00
Watford	100	....	....	59 45	42,671 00	2,291 00
Wyoming	100	....	....	38 34	25,624 00	1,364 00
West Lorne	50	....	4,000	55 60	18,711 00	1,120 00
Burgessville	30	....	....	48 38	10,318 00	551 00
Springfield	20	....	....	65 00	10,540 00	509 00

SCHEDULE "B."

Municipality.	Quantity of Power Applied for in H.P.
Collingwood	1,000
Midland	800
Penetang	600
Stayner	125
Barrie	700
Creemore	75
Coldwater	100
Elmvale	100
Township of Tay	100

This Indenture, made in duplicate the seventeenth day of February, in the year of our Lord one thousand nine hundred and seventeen (1917).

Between:

The Hydro-Electric Power Commission of Ontario, hereinafter called the "Commission," party of the first part;

and

The Municipal Corporation of the Town of Collingwood, hereinafter called the "Corporation," party of the second part.

Whereas, pursuant to an Act to provide for the transmission of electrical power to municipalities, known as *The Power Commission Act* and amendments thereto, the Commission entered into an agreement with the Corporation for a supply of electrical energy, dated the twenty-fourth (24th) day of July, Nineteen hundred and twelve (1912), (and the ratepayers of the Corporation assented to the by-laws authorizing the Corporation to enter into such an agreement with the Commission for such power);

And whereas, in accordance with the powers conferred by legislation upon the Commission by the said *Power Commission Act* and amendments thereto, the Commission purchased the generating station, hydraulic plant and all works in connection with same belonging to the Simcoe Railway and Power Company, located at what is known as the Big Chute on the Severn River, and all of the transmission lines, sub-stations and transmission equipment also belonging to the said Simcoe Railway and Power Company between the said generating station and the Town of Midland;

And whereas, the purchase of such generating station hydraulic plant, works, transmission lines, sub-stations and all properties belonging to the said Simcoe Railway and Power Company was made for the purpose of supplying to better advantage and with greater efficiency the power requirements of the various municipalities located in the surrounding and adjacent district:

And whereas, in order to comply with such changed conditions it is the desire of both parties that it be declared that the said agreement, dated July 24th, 1912, be terminated and superseded by this agreement as hereinafter set out;

And whereas, the electors of the Corporation assented to by By-law No. 873, authorizing the Corporation to enter into such an agreement:

1. Now therefore this indenture witnesseth, that in consideration of the premises and of the agreements of the Corporation herein set forth, subject to the provisions of the said Act and amendments thereto, the Commission and the Corporation mutually agree with each other as follows:

2. The Commission agrees:

(*a*) To reserve and deliver at the earliest possible date one thousand (1,000) h.p. or more of electrical power to the Corporation.

(*b*) At the expiration of reasonable notice in writing, which may be given by the Corporation from time to time during the continuance of this agreement, to reserve and deliver to the Corporation additional electric power when called for.

(*c*) To use at all times first-class, modern, standard commercial apparatus and plant, and to exercise all due skill and diligence so as to secure satisfactory operation of the plant and apparatus of the Corporation.

(*d*) To deliver commercially continuous 24-hour power every day in the year to the Corporation at the distribution bus bars in the Commission's sub-station within the Corporation's limits.

3. The Corporation agrees:

(*a*) To use all diligence by every lawful means in its power to prepare for the receipt and use of the power dealt with by this agreement so as to be able to receive power when the Commission is ready to deliver same.

(*b*) To pay annually interest at rate payable by the Commission upon the Corporation's proportionate part (based on the quantity of electrical energy or power taken) of all moneys expended by the Commission on capital account for the acquiring of properties and rights, the acquiring and construction of generating plants, transformer stations, transmission lines, distributing stations and other works necessary for the delivery of said electrical energy or power to the Corporation under the terms of this contract.

Also to pay an annual sinking fund instalment of such an amount as to form at the end of 30 years, with accrued interest, a sinking fund sufficient to repay the Corporation's proportionate part, based as aforesaid, of all moneys advanced by the Province of Ontario for the acquiring of properties and rights, the acquiring and construction of generating plants, transformer stations, transmission lines, distributing stations and other works necessary for the delivery of said electrical energy or power, delivered to the Corporation under the terms of this contract.

Also to pay the Corporation's proportionate part, based as aforesaid, of the cost of lost power and the cost of generating, maintaining, repairing, renewing and insuring said generating plants, transformer stations, transmission lines, distributing stations and other necessary works. Subject to adjustment under Clause 7 of this agreement.

(*c*) The amounts payable under this contract shall be paid in twelve monthly payments, in gold coin of the present standard of weight and fineness, at the offices of the Commission at Toronto. Bills shall be rendered by the Commission on or before the 5th day of each month and paid by the Corporation on or before the 15th day of each month. If any bill remains unpaid for fifteen days, the Commission may, in addition to all other remedies and without notice, discontinue the supply of power to the Corporation until such bill is paid. No such discontinuance shall relieve the Corporation from the performance of the covenants, provisoes and conditions herein contained. All payments in arrears shall bear interest at the legal rate.

(*d*) To take electric power exclusively from the Commission during the continuance of this agreement.

(*e*) To co-operate by all means in its power at all times with the Commission to increase the quantity of power required from the Commission, and in all other respects to carry out the objects of this agreement and of the said Act.

(*f*) To pay for three-fourths of the power ordered from time to time by the Corporation and held in reserve for it as herein provided, whether it takes the same or not. When the highest average amount of power taken for any twenty consecutive minutes during any month shall exceed during the twenty consecutive minutes three-fourths of the amount ordered by the Corporation and held in reserve, then the Corporation shall pay for this greater amount during the eniire month.

(*g*) If the Corporation during any month takes more than the amount of power ordered and held in reserve for it, as determined by an integrated peak, or highest average, for a period of twenty consecutive minutes, the taking of such excess shall thereafter constitute an obligation on the part of the Corporation to pay for, and on the part of the Commission to hold in reserve, such increased quantity of power in accordance with the terms and conditions of this contract.

(*h*) When the power factor at any time falls below ninety per cent. (90%) the Corporation shall pay for ninety per cent. (90%) of the kilovolt amperes, providing that said ninety per cent. (90%) of said kilovolt amperes is greater than the maximum kilowatts for any twenty (20) minute period during the month.

(*i*) To use at all times first-class, modern, standard commercial apparatus and plant, to be approved by the Commission.

(*j*) To exercise all due skill and diligence so as to secure satisfactory operation of the plant and apparatus of the Commission and of the Corporation.

4. This agreement shall remain in force for thirty (30) years from the date of execution and completion thereof, subject to Section 10 hereof.

5. (*a*) The power shall be alternating, three-phase, having a periodicity of approximately sixty (60) cycles per second and shall be delivered as aforesaid at a voltage suitable for local distribution.

(*b*) That the meters with their series and potential transformers shall be connected at the point of delivery.

(*c*) That the maintenance by the Commission of approximately the agreed voltage at approximately the agreed frequency at the sub-station in the limits of the Corporation shall constitute the supply of all power involved herein and the fulfilment of all operating obligations hereunder, and when the voltage and frequency are so maintained, the amount of power, its fluctuations, load factor, power factor, distribution as to phases and all other electrical characteristics, and qualities are under the sole control of the Corporation, their agents, customers, apparatus, appliances and circuits.

6. The Engineers of the Commission, or one or more of them, or any other person or persons appointed for this purpose by the Commission, shall have the right from time to time during the continuance of this agreement to inspect the apparatus, plant and property of the Corporation and take records at all reasonable hours.

7. The Commission shall at least annually adjust and apportion the amount or amounts payable by the Municipal Corporation or Corporations for such power and such interest, sinking fund, cost of lost power and cost of generating, operating, maintaining, repairing, renewing and insuring said works.

If at any time any other Municipal Corporation, or pursuant to said Act any railway or distributing company, or any other Corporation or person, applies to the Commission for a supply of power, the Commission shall notify the applicant and the involved Corporation or Corporations in writing, of a time and place to hear all representations that may be made as to the terms and conditions for such supply.

Without discrimination in favour of the applicants as to the price to be paid, for equal quantities of power, the Commission may supply power upon such terms and conditions as may, having regard to the risk and expense incurred and paid, and to be paid by the Corporation, appear equitable to the Commission and are approved by the Lieutenant-Governor in Council.

No such application shall be granted if the said works or any part thereof are not adequate for such supply, or if the supply of the Corporation will be thereby injuriously affected, and no power shall be supplied within the limits of a Municipal Corporation taking power from the Commission at the time of such application without the written consent of such Corporation.

In determining the quantity of power supplied to a Municipal Corporation, the quantity supplied by the Commission within the limits of the Corporation to any applicant, other than a Municipal Corporation, shall be computed as part of the quantity supplied to such Corporation, but such Corporation shall not be liable for payment for any portion of the power so supplied. No power shall be supplied by the Municipal Corporation to any railway or distributing company without the written consent of the Commission. Power shall not be sold for less than the cost, and there shall be no discrimination as regards price and quantity.

8. It is hereby declared that the Commission is to be a trustee of all property held by the Commission under this agreement for the Corporation or Corporations supplied by the Commission, but the Commission shall be entitled to a lien upon said property for all moneys expended by the Commission under this agreement and not repaid. At the expiration of this agreement the Commission shall determine and adjust the rights of the Corporation and any other (if any) supplied by the Commission, having regard to the amounts paid by them respectively under the terms of this agreement, and such other considerations as may appear equitable to the Commission and are approved by the Lieutenant-Governor in Council.

9. If differences arise between Corporations to which the Commission is supplying power, the Commission may, upon application, fix a time and place to hear all representations that may be made by the parties, and the Commission shall, in a summary manner, when possible, adjust such differences and such adjustment shall be final.

The Commission shall have all the powers that may be conferred upon a Commissioner appointed under the Act respecting Enquiries Concerning Public Matters.

10. Notwithstanding anything herein contained to the contrary, it is hereby understood and agreed that this agreement shall come into effect upon the date of its approval by the Lieutenant-Governor in Council, or its ratification by the Legislature of the Province of Ontario, and that the said agreement between the parties hereto bearing date the.....day of.....19 , shall thereupon be terminated and become of no effect and be superseded by this agreement.

11. This agreement shall extend to, be binding upon, and enure to the benefit of the successors and assigns of the parties hereto.

In witness whereof the Commission and the Corporation have respectively affixed their corporate seals and the hands of their proper officers.

HYDRO-ELECTRIC POWER COMMISSION OF ONTARIO.

A. Beck, *Chairman.*

(Seal.)

W. W. Pope, *Secretary.*

MUNICIPAL CORPORATION OF THE TOWN OF COLLINGWOOD.

W. B. H. Patton, *Mayor.*

(Seal.)

J. A. Duncan, *Clerk.*

SCHEDULE "C."

This Agreement made this fourth day of January, A.D. 1917.

Between:

The Hydro-Electric Power Commission of Ontario, herein called the "Commission," party of the first part,

and

The Municipal Corporation of the Township of Scarborough, herein called the "Corporation," party of the second part.

Whereas pursuant to an Act to provide for the transmission of electrical power to municipalities, the Corporation applied to the Commission for a supply of power;

And whereas the Commission has entered into contracts with the Ontario Power Company of Niagara Falls (hereinafter called the Company), for such power;

And whereas the Corporation under the provisions of *The Power Commission Act* and amendments thereto and *The Power Commission Act* of 1911, being "An Act to Provide for the Local Distribution of Electrical Power," has, at the request of a number of ratepayers (petitioners) applied to the Commission for a supply of electrical power or energy, and has passed a by-law, No. 925, to authorize the execution of an agreement therefor.

1. Now therefore this indenture witnesseth that in consideration of the premises and of the agreements of the Corporation set forth, subject to the provisions of said Act and amendments and of the said contract, the Commission agrees with the Corporation:

(*a*) To reserve and deliver at the earliest possible date electrical power to the Corporation as required by the Corporation.

(*b*) At the expiration of thirty (30) days notice in writing, which may be given by the Corporation from time to time during the continuance of this agreement, to reserve and deliver to the Corporation additional electrical power as may be required from time to time.

(*c*) To use at all times first-class, modern, standard, commercial apparatus and plant, and to exercise due skill and diligence so as to secure the most perfect operation of the plant and apparatus of the Corporation.

(*d*) Power shall be delivered to the Corporation at approximately 2,200 or 4,000 volts, or at any other primary voltage that may be available for the Corporation's use.

(*e*) To supply and construct all 2,200, 4,000 or other lines at primary voltage made necessary by contracts for electric service made between the Corporation and residents or users, within the township, from the Commis-

sion's transformer station or stations to the service transformers of the Corporation, located at such points as the Commission may approve.

2. In consideration of the premises and of the covenants and agreements herein set forth, the Corporation agrees with the Commission:—

(*a*) To use all diligence by every lawful means in its power to prepare for the receipt and use of the power dealt with by this agreement, so as to be able to give notice as specified in paragraph 1 (*b*).

(*b*) Subject to the provisions of paragraph 2 (*g*) herein, to pay to the Commission monthly, for all power taken, the cost of the power delivered to the Commission, plus the charges in connection with the delivery of the power to the municipality as outlined in clauses 2 (*c*) and (*d*).

(*c*) To pay, annually, in twelve monthly instalments, interest upon its proportionate part of the moneys expended by the Commission on capital account for the construction of lines, transformer stations and other necessary works for the delivery of power to the Corporation; to pay an annual sum for its proportionate part of the cost of the said construction, so as to form in thirty years a sinking fund for the retirement of securities issued by the Province of Ontario; and to bear its proportionate part of the line loss and pay its proportionate part of the cost to operate, maintain, repair, renew and insure the said lines, stations and works. All payments under this paragraph shall be subject to adjustment under paragraph 7.

(*d*) In addition to the cost of power, and the cost of delivering it to the Corporation as provided for in paragraphs 2 (*b*) and (*c*), to pay to the Commission in half-yearly instalments, interest and sinking fund on a thirty-year basis on all capital invested by the Commission in 2,200, 4,000 or other lines of primary voltage as provided for in paragraph 1 (*c*), and to maintain, repair, renew and operate the said lines, and set apart a depreciation fund at the rate of 5 per cent. per annum on all capital expended by the Commission on such construction.

(*e*) The amounts payable in accordance with clause 2 (*b*), and (*c*) and (*d*) shall be paid in gold coin of the present standard of weight and fineness, at the office of the Commission at Toronto, and bills shall be rendered by the Commission on or before the 5th day and paid by the Corporation on or before the 15th day of each month, except that payments under clause 2 (*d*) shall be made half yearly. If any bill remains unpaid for fifteen days, the Commission may, in addition to all other remedies and without notice, discontinue the supply of power to the Corporation until the said bill is paid. No such discontinuance shall relieve the Corporation from the performance of the covenants, provisoes and conditions herein contained. All payments in arrears shall bear interest at the legal rate.

(*f*) To take power exclusively from the Commission during the continuance of this agreement.

(*g*) To pay for three-fourths of the power ordered from time to time by the Corporation and held in reserve for it as herein provided, whether it takes the same or not. When the highest average amount of power taken for any twenty consecutive minutes during any month shall exceed during

the twenty consecutive minutes three-fourths of the amount ordered by the Corporation and held in reserve, then the Corporation shall pay for this greater amount during the entire month.

If the Corporation during any month takes more than the amount of power ordered and held in reserve for it, as determined by an integrated peak, or highest average, for a period of twenty consecutive minutes, the Corporation shall pay for this greater amount of power during the entire month. The taking of such excess shall thereafter constitute an obligation on the part of the Corporation to pay for and on the part of the Commission to hold in reserve an additional block of power in accordance with the terms and conditions of this contract.

When the power factor of the greatest amount of power taken for said twenty consecutive minutes falls below 90 per cent. the Corporation shall pay for 90 per cent. of said power divided by the power factor.

(*h*) To use at all times first-class, modern, standard, commercial apparatus and plant to be approved by the Commission and to exercise all due skill and diligence so as to secure the most perfect operation of the plant and apparatus of the Commission and of the Company.

(*i*) To co-operate, by all means in its power, at all times, with the Commission, to increase the quantity of power required from the Commission and in all other respects to carry out the objects of this agreement and of the said Act.

3. If, as therein provided, the said contracts are continued until the 19th day of December, 1939, this agreement shall remain in force until that date.

4. The power shall be three-phase alternating commercially continuous twenty-four hour power every day of the year except as provided in paragraph 6, having a periodicity of approximately 25 cycles per second, and shall be delivered as aforesaid at a voltage suitable for distribution within the municipality.

(*a*) That the meters with their series and potential transformers shall be connected at the point of delivery, and shall be subject to test as to accuracy by either party hereto.

(*b*) The maintenance by the Commission of approximately the agreed voltage at approximately the agreed frequency at the point of delivery to the Corporation shall constitute the supply of all power involved herein and the fulfilment of all operating obligations hereunder; and when voltage and frequency are so maintained, the amount of the power, its fluctuations, load factor, power factor, distribution as to phases, and all other electric characteristics and qualities are under the sole control of the Corporation, their agents, customers, apparatus, appliances and circuits.

5. The Engineers of the Commission, or one or more of them, or any other person or persons appointed for this purpose by the Commission, shall have the right from time to time during the continuance of this agreement, to inspect the apparatus, plant and property of the Corporation and take records at all reasonable hours.

6. In case the Commission should at any time or times be prevented from supplying said power, or any part thereof, or in case the Corporation shall at any time be prevented from taking said power, or any part thereof, by strike, lock-out, fire, invasion, explosion, act of God, or the King's enemies, or any other cause reasonably beyond their control, then the Commission shall not be bound to deliver such power during such time, and the Corporation shall not be bound to pay the price of said power, during such time.

7. The Commission shall at least annually adjust and apportion the amounts payable by municipal corporations for such power and such interest, sinking fund, line loss, and cost of operating, maintaining, repairing, renewing and insuring the line and works.

8. It is hereby declared that the Commission is to be a trustee of all property held by the Commission under this agreement for the Corporation and other municipal corporations supplied by the Commission, but the Commission shall be entitled to a lien upon said property for all moneys expended by the Commission under this agreement and not repaid. At the expiration of this agreement the Commission shall determine and adjust the rights of the Corporation and other municipal corporations, supplied by the Commission, having regard to the amounts paid by them, respectively, under the terms of this agreement, and such other considerations, as may appear equitable to the Commission and are approved by the Lieutenant-Governor in Council.

9. If at any time any other municipal corporation, or pursuant to said Act, any railway or distributing company, or any other corporation or person, applies to the Commission for a supply of power, the Commission shall notify the applicant and the Corporation in writing, of a time and place and hear all representations that may be made as to the terms and conditions for such supply.

Without discrimination in favour of the applicants as to the price to be paid, for equal quantities of power, the Commission may supply power upon such terms and conditions as may, having regard to the risk and expense incurred, and paid, and to be paid by the Corporation, appear equitable to the Commission, and are approved by the Lieutenant-Governor in Council.

10. In case any municipal corporation, or any person, firm or corporation which shall contract with the Commission or with any municipal corporation for a supply of power furnished to the Commission by the Company shall suffer damages by the act or neglect of the Company, and such municipal corporation, person, firm or corporation would, if the Company had made the said contracts directly with them, have had a right to recover such damages or commence any proceedings or any other remedy, the Commission shall be entitled to commence any such proceedings to bring such action for or on behalf of such municipal corporation, person, firm or corporation, and notwithstanding any act, decision or rule of law to the contrary, the Commission shall be entitled to all the rights and remedies of such municipal corporation, person, firm or corporation, including the right to recover such damages, but no action shall be brought by the Commission until such municipal corporation, person, firm or corporation shall have agreed with the Commission to pay any costs that may be adjudged to be paid if such proceedings or action is unsuccessful. The rights and remedies of any such municipal corporation, person, firm or corporation shall not be hereby prejudiced.

11. If any differences arise between Corporations to whom the Commission is supplying power, the Commission may upon application fix a time and place to hear all representations that may be made by the parties, and the Commission shall, in a summary manner when possible, adjust such differences and such adjustment shall be final.

The Commission shall have all the powers that may be conferred upon a Commissioner appointed under the *Act respecting Enquiries concerning Public Matters.*

12. This agreement shall extend to, be binding upon and enure to the benefit of the successors and assigns of the parties hereto.

In witness whereof the Commission and the Corporation have respectively affixed their corporate seals and the hands of their proper officers.

HYDRO-ELECTRIC POWER COMMISSION OF ONTARIO.

A. Beck, *Chairman.*

(Seal.)

W. W. Pope, *Secretary.*

MUNICIPAL CORPORATION OF THE TOWNSHIP OF SCARBOROUGH.

J. G. Connell,

(Seal.)

W. D. Annis, *Clerk.*

SCHEDULE "C."

Municipality.	*Quantity of Power Applied for in H.P.*
Township of Scarborough.	As required by the Corporation.
" Vaughan.	" " "
" Townsend.	" " "
" Dereham.	" " "
" South Norwich.	" " "
" North Norwich.	" " "
" Chinguacousy.	" " "
" Biddulph.	" " "
" Brantford.	" " "

SCHEDULE "D."

This Indenture made in duplicate the 4th day of December, in the year of our Lord one thousand nine hundred and sixteen (1916).

Between

The Hydro-Electric Power Commission of Ontario, hereinafter called the "Commission," party of the first part,

and

The Municipal Corporation of the City of Kingston, hereinafter called the "Corporation," party of the second part.

Whereas, by the *Power Commission Act*, passed by the Legislature of the Province of Ontario, Revised Statutes of Ontario, 1914, Chapter 39, and amendments thereto, it was, amongst other things, enacted that any municipal corporation might apply to the Hydro-Electric Power Commission of Ontario for the transmission to such Corporation of electric power and energy for the use of the Corporation and the inhabitants thereof for lighting, heating and power purposes;

And whereas the Corporation has applied to the Commission for a supply of electrical power or energy;

And whereas the Commission is in possession of, and operating in trust for the Ontario Government, the power developments known as the Central Ontario System and can supply therefrom electrical energy sufficient for the needs of the Corporation;

And whereas the electors of the Corporation assented to by-laws authorizing the Corporation to enter into a contract with the Commission for such power;

Now therefore this indenture witnesseth that in consideration of the premises and of the agreements of the parties hereto each agree with the other as follows:

1. The Commission agrees:

(*a*) To reserve for and deliver to the Corporation one thousand two hundred (1,200) or more horse-power of electrical power or energy at the point of delivery hereinafter specified.

(*b*) To reserve and deliver to the Corporation additional electrical power at the expiration of reasonable notice in writing, which may be given by the Corporation from time to time during the continuance of this agreement.

(*c*) To use at all times first-class, modern, standard, commercial apparatus and plant and to exercise all due skill and diligence so that the service rendered to the Corporation hereunder shall be satisfactory.

(*d*) To deliver commercially continuous twenty-four (24) hour power every day in the year, except as provided for herein, at the point of delivery, herein defined as the low tension outlets of the Commission's substation, which the Commission proposes to erect in the City of Kingston.

2. The Corporation agrees:

(*a*) To use all diligence by every lawful means in its power to prepare for the receipt and use of the power covered by this agreement, so as to be able to receive power on the date of delivery.

(*b*) To pay to the Commission for all power taken or held in reserve in monthly payments in gold coin at Toronto under the following schedule of rates:

For 1,200 h.p. and up to 2,500 h.p., at the rate of $28.00 per h.p. per annum.

When the amount of power taken and held in reserve for the Corporation increases to 2,500 h.p., the rate for all power shall be $27.00 per h.p. per annum; and

When the said power increases to 3,000 h.p., the rate for all power shall be $26.00 per h.p. per annum;

When the said power increases to 3,500 h.p., the rate for all power shall be $25.00 per h.p. per annum;

When the said power increases to 4,000 h.p., the rate for all power shall be $24.00 per h.p. per annum.

Each month's payments are to be made as though the maximum amount taken during that month was taken for the whole month, save that paragraph (*d*) hereof shall govern the minimum.

(*c*) If the Corporation during any month takes more than the amount of power ordered and held in reserve for it for twenty (20) consecutive minutes, the taking of such excess power shall thereafter constitute an obligation on the part of the Corporation to pay for, and on the part of the Commission, as long as this greater amount does not exceed the maximum hereunder, to hold in reserve such increased quantity of power in accordance with the terms and conditions of this agreement.

(*d*) To pay each month to the Commission as a minimum for seventy-five per cent. (75%) of the power held in reserve for the Corporation at the rate fixed herein except as provided for in Clause 5 (*b*) hereof.

(*e*) At all times to take and use the three-phase power in such a manner that the current will be equally taken from the three phases and in no case shall the difference between any two phases be greater than ten per cent. (10%).

(*f*) At all times to so take and use the three-phase power that the ratio of the kilowatts to the kilovolt-amperes is a maximum, but in any event the customer shall pay for at least ninety per cent. (90%) of the maximum kilovolt-amperes considered as true power or kilowatts. The maximum demand in kilovolt-amperes or kilowatts shall be taken as the maximum average or integrated demand over any twenty consecutive minutes.

One horse-power is defined as 0.746 kilowatts.

One kilowatt is defined as the produce of the instantaneous current, voltage and power-factor of the load as shown by a standard polyphase wattmeter and divided by 1,000.

One kilovolt-ampere is defined as the product of the simultaneous average current per phase times the average voltage between phases, times 1,732 and divided by 1,000.

For the purposes of this agreement the kilovolt-amperes may be determined either directly by current and voltage measurements or by the kilowatts divided by the power factor or by any other commercially accurate means as may be approved by the Commission.

The power factor is defined as kilowatts divided by kilovolt-amperes.

(*g*) Bills shall be rendered by the Commission to the Corporation on or before the tenth day, and paid by the Corporation on or before the twentieth day of each calendar month.

If any bill remains unpaid for fifteen (15) days after the date thereof the Commission may, in addition to all other remedies, and without notice, discontinue the supply of power to the Corporation until the said bill is paid, and no such discontinuance by the Commission shall relieve the Corporation from the performance of the covenants, provisoes and conditions herein contained.

All payments in arrears shall bear interest at the legal rate.

(*h*) To use at all times modern, standard, commercial apparatus and plant to be approved by the Commission from time to time, and to so operate and conduct the plant and apparatus as to cause minimum disturbances or fluctuations to the Commission's supply, and to exercise all due skill and diligence so as to secure the satisfactory operation of the plant and apparatus of both the Commission and the Corporation.

(*i*) Should it be expedient or necessary for the Commission, in order to deliver power hereunder, to construct or build poles, lines, cables, transformers, switches or other appliances or devices on, over or through the property of the Corporation, the Corporation hereby agrees to supply and arrange for such necessary rights-of-way free of cost, and satisfactory to the Commission for the life of this agreement, or renewals thereof, and for thirty (30) days thereafter, so that the Commission may build, erect, construct, operate, repair, maintain and remove any of said apparatus or devices belonging to the Commission.

The power delivered hereunder shall be alternating, three-phase, having a periodicity of approximately 60 cycles per second and a pressure of approximately 2,300 volts between phase wires, subject to normal variations in both frequency and voltage.

4. (*a*) Measurement of the power held in reserve or taken by the Corporation hereunder shall be made by means of a standard polyphase Graphic Recording Wattmeter, and other meters as required, so arranged as to accurately measure and record the power taken by the Corporation.

The greatest average or integrated power demand made by the Corporation for twenty (20) consecutive minutes in any month, as shown by the aforementioned instruments, shall be used as a basis of billing and paying for the power taken by the Corporation hereunder.

(*b*) The point of measuring the power covered by this agreement shall be as near as possible to the point of delivery, and the instruments, with the necessary current and potential transformers for the measurement of power hereunder shall be provided, installed and maintained correct by the Commission.

(*c*) Whenever the said measuring instruments are connected at other than the point of delivery their reading shall be subject to a correction and shall be corrected to give a reading such as would be obtained by instruments connected at the point of delivery. Such corrections shall be based upon tests or calculations by the Commission.

(*d*) Should the point of measurement be located on the premises of the Corporation no rental charge shall be made to the Commission for the location of said instruments or transformers on the Corporation's premises.

(*e*) Access to said instruments and transformers belonging to the Commission shall be free to the Commission at any and all times and the Commission may test, calibrate or remove said measuring instruments and transformers at any reasonable time, but when possible the Corporation shall be advised at least seven days in advance of the Commission's intention to recalibrate, remove or change the measuring instruments.

(*f*) The Corporation shall have the right to test any such measuring instruments in the presence of a representative of the Commission, by giving to the Commission seven days' previous notice in writing of its desire to test such measuring instruments.

(*g*) The Commission shall repair or replace and re-test defective meters or measuring equipment within a reasonable time, but, during the time there is no meter in service it shall be assumed that the power consumed is the same as for the other days of the same month on which a similar load existed.

(*h*) The Corporation shall be responsible for any damage to the property or apparatus furnished by the Commission for the purpose of supplying or measuring power hereunder and installed on the Corporation's property, providing such damage originates from a source external to the said apparatus of the Commission, and is not due to defects in the apparatus of the Commission.

5. (*a*) The maintenance by the Commission of approximately the agreed voltage at approximately the agreed frequency at the point of delivery shall constitute the supply of power involved herein and a fulfilment of all the operating obligations hereunder, and when the voltage and frequency are so maintained the amount of power, its fluctuations, load factor, power factor, distribution as to phases, and all other characteristics and qualities are under the sole control of the Corporation, his agents, apparatus, appliances and circuits.

(*b*) In case the Commission shall at any time or times be prevented from delivering said power or any part thereof by strikes, lockouts, riot, fire, invasion, explosion, act of God, the King's enemies, or any other cause or causes reasonably beyond its control, then the Commission shall not be bound to deliver such power during such time and the Corporation shall not be bound to pay for such power during such time.

(*c*) The Commission shall be prompt and diligent in removing the cause of such interruption, but the Corporation shall not be bound to pay for such

power during such time. As soon as the cause of such interruption is removed the Commission shall, without any delay, deliver the said power as aforesaid, and the Corporation shall take and use the same.

(*d*) It is further agreed hereby that the Commission shall have the right at reasonable times, and when possible after due notice has been given to the Corporation, to discontinue the supply of power to the Corporation for the purpose of safeguarding life or property, or for the purpose of making repairs, renewals, or replacements to the lines or apparatus of the Commission, but all such interruptions shall be of a minimum duration and when possible arranged for at a time least objectionable to the Corporation.

Such interruptions shall not release the Corporation from its obligations to pay for or resume the use of power when service is restored.

6. A representative or engineer of the Commission appointed for this purpose, may, at any reasonable time during the continuance of this agreement, have access to the premises of the Corporation for the purpose of inspecting the electrical apparatus, plant or property of the Corporation and to take records therefrom as required.

7. It is mutually agreed:

That this agreement shall be binding upon both parties hereto for a period of twenty (20) years, beginning on the day and date when power is first taken hereunder, and this agreement may be extended for a further term of five (5) years upon the mutual agreement of both parties hereto before three (3) months of the expiration of this agreement or any extension or renewal period.

8. The Commission shall be entitled at the termination of this agreement or any extension thereof, or within thirty (30) days thereafter, to remove from the Corporation's premises any and all plant or equipment which may have been installed by the Commission for the supply or measurement of power hereunder.

In witness whereof the said Commission and the said Corporation have duly affixed their respective seals and signatures of their respective officers this fourth day of December, A.D. one thousand nine hundred and sixteen (1916).

HYDRO-ELECTRIC POWER COMMISSION OF ONTARIO.

Signed, sealed and delivered
in the presence of

(Sgd.) W. M. McLachlan.

(Sgd.) A. Beck, *Chairman.*

(Sgd.) W. W. Pope, *Secretary.*

THE MUNICIPAL CORPORATION OF THE CITY OF KINGSTON.

In the presence of

(Sgd.) Alex. W. Richardson, *Mayor.*

(Sgd.) M. E. Ball.

(Sgd.) W. W. Sands, *City Clerk.*

(Seal.)

SCHEDULE "E."

This Indenture made in Duplicate the 2nd day of June, in the year of our Lord, one thousand, nine hundred and sixteen.

Between

The Hydro-Electric Power Commission of Ontario, hereinafter called the "Commission," party of the first part;

and

The Municipal Corporation of the Town of Arthur, hereinafter called the "Corporation," party of the second part.

Whereas, pursuant to "An Act to Provide for the Transmission of Electrical Power to Municipalities, known as the *Power Commission Act* and amendments thereto," the Corporation applied to the Commission for a supply of power, and the Commission furnished the Corporation with estimates of the total cost of such power, ready for distribution within the limits of the Corporation (and the electors of the Corporation assented to the by-laws authorizing the Corporation to enter into a contract with the Commission for such power).

1. Now therefore this indenture witnesseth that in consideration of the premises and of the agreement of the Corporation herein set forth, subject to the provisions of the said Act and amendments thereto, the Commission agrees with the Corporation:

(*a*) To reserve and deliver at the earliest possible date 150 h.p. or more of electrical power to the Corporation.

(*b*) At the expiration of reasonable notice in writing which may be given by the Corporation from time to time during the continuance of this agreement, to reserve and deliver to the Corporation additional electric power when called for.

(*c*) To use at all times first-class, modern, standard commercial apparatus and plant, and to exercise all due skill and diligence so as to secure satisfactory operation of the plant and apparatus of the Corporation.

(*d*) To deliver commercially continuous 24-hour power every day in the year to the Corporation at the distribution bus bars in the Commission's sub-station located at Grand Valley.

2. In consideration of the premises and of the agreement herein set forth, the Corporation agrees with the Commission—

(*a*) To use all diligence by every lawful means in its power to prepare for the receipt and use of the power dealt with by this agreement so as to be able to receive power when the Commission is ready to deliver same.

(*b*) To pay annually, interest at rate payable by the Commission upon the Corporation's proportionate part (based on the quantity of electrical

energy or power taken), of all the moneys expended by the Commission on capital account for the acquiring of properties and rights, the acquiring and construction of generating plants, transformer stations, transmission lines, distributing stations, and other works necessary for the delivery of said electrical energy or power to the Corporation under the terms of this contract.

Also to pay an annual sinking fund instalment of such amount as to form at the end of 30 years, with accrued interest, a sinking fund sufficient to repay the Corporation's proportionate part, based as aforesaid, of all moneys advanced by the Province of Ontario for the acquiring of properties and rights, the acquiring and construction of generating plants, transformer stations, transmission lines, distributing stations and other works necessary for the delivery of said electrical energy or power, delivered to the Corporation under the terms of this contract. Also to pay the Corporation's proportionate part, based as aforesaid, of the cost of lost power and the cost of generating, maintaining, repairing, renewing and insuring said generating plants, transformer stations, transmission lines, distributing stations and other necessary works, subject to adjustment under Clause 6 of this agreement.

(*c*) The amounts payable under this contract shall be paid in twelve monthly payments, in gold coin of the present standard weight and fineness, at the offices of the Commission at Toronto. Bills shall be rendered by the Commission on or before the 5th day and paid by the Corporation on or before the 15th day of each month. If any bill remains unpaid for fifteen days, the Commission may, in addition to all other remedies and without notice, discontinue the supply of power to the Corporation until said bill is paid. No such discontinuance shall relieve the Corporation from the performance of the covenants, provisoes and conditions herein contained. All payments in arrears shall bear interest at the legal rate.

(*d*) To take electric power exclusively from the Commission during the continuance of this agreement.

(*e*) To co-operate by all means in its power at all times with the Commission to increase the quantity of power required from the Commission, and in all other respects to carry out the objects of this agreement, and of the said Act.

(*f*) To pay for three-fourths of the power ordered from time to time by the Corporation and held in reserve for it as herein provided, whether it takes the same or not. When the highest average amount of power taken for any twenty consecutive minutes during any month shall exceed during the twenty consecutive minutes three-fourths of the amount ordered by the Corporation and held in reserve, then the Corporation shall pay for this greater amount during the entire month.

(*g*) If the Corporation during any month takes more than the amount of power ordered and held in reserve for it, as determined by an integrated peak, or highest average, for a period of twenty consecutive minutes, the taking of such excess shall thereafter constitute an obligation on the part of the Corporation to pay for, and on the part of the Commission to hold in reserve, such increased quantity of power in accordance with the terms and conditions of this contract.

(*h*) When the power factor of the highest average amount of power taken for said twenty consecutive minutes falls below 90% the Corporation shall pay for 90% of said power divided by the power factor.

(*i*) To use at all times first-class, modern, standard commercial apparatus and plant, to be approved by the Commission.

(*j*) To exercise all due skill and diligence so as to secure satisfactory operation of the plant and apparatus of the Commission and of the Corporation.

3. This agreement shall remain in force for thirty years from date of the first delivery of power under this contract.

4. The power shall be alternating, three-phase, having a periodicity of approximately 60 cycles per second, and shall be delivered as aforesaid at a voltage suitable for local distribution.

(*a*) That the meters with their series and potential transformers shall be connected at the point of delivery at the Commission's substation located at Grand Valley.

(*b*) The maintenance by the Commission of approximately the agreed voltage at approximately the agreed frequency at the Commission's substation at Grand Valley shall constitute the supply of all power involved herein and the fulfilment of all operating obligations hereunder, and when voltage and frequency are so maintained, the amount of power, its fluctuations, load factor, power factor, distribution as to phases and all other electric characteristics and qualities, are under the sole control of the Corporation, their agents, customers, apparatus, appliances and circuits.

5. The engineers of the Commission, or one or more of them, or any other person or persons appointed for this purpose by the Commission, shall have the right from time to time during the continuance of this agreement, to inspect the apparatus, plant and property of the Corporation and take records at all reasonable hours.

6. The Commission shall at least annually adjust and apportion the amount or amounts payable by the Municipal Corporation or Corporations for such power and such interest, sinking fund, cost of lost power and cost of generating, operating, maintaining, repairing, renewing and insuring said works.

If at any time any other Municipal Corporation, or pursuant to said Act, any railway or distributing company, or any other Corporation or person, applies to the Commission for a supply of power, the Commission shall notify the applicant and the involved Corporation or Corporations in writing, of a time and place to hear all representations that may be made as to the terms and conditions for such supply.

Without discrimination in favour of the applicants as to the price to be paid, for equal quantities of power, the Commission may supply power upon such terms and conditions as may, having regard to the risk and expense incurred, and paid, and to be paid by the Corporation, appear equitable to the Commission, and are approved by the Lieutenant-Governor in Council.

No such application shall be granted if the said works or any part thereof are not adequate for such supply, or if the supply of the Corporation will be thereby injuriously affected, and no power shall be supplied within the limits of a Municipal Corporation taking power from the Commission at the time of such application, without the written consent of such Corporation.

In determining the quantity of power supplied to a Municipal Corporation, the quantity supplied by the Commission within the limits of the Corporation to any applicant, other than a Municipal Corporation, shall be computed as part of the quantity supplied to such Corporation, but such Corporation shall not be liable for payment for any portion of the power so supplied. No power shall be supplied by the Municipal Corporation to any railway or distributing company without the written consent of the Commission. Power shall not be sold for less than the cost, and there shall be no discrimination as regards price and quantity.

7. It is hereby declared that the Commission is to be a trustee of all property held by the Commission under this agreement for the Corporation or Corporations supplied by the Commission, but the Commission shall be entitled to a lien upon said property for all moneys expended by the Commission under this agreement and not repaid. At the expiration of this agreement the Commission shall determine and adjust the rights of the Corporation and any other (if any) supplied by the Commission, having regard to the amounts paid by them respectively under the terms of this agreement and such other considerations as may appear equitable to the Commission and are approved by the Lieutenant-Governor in Council.

8. If differences arise between Corporations to which the Commission is supplying power, the Commission may upon application fix a time and place and hear all representations that may be made by the parties, and the Commission shall, in a summary manner, when possible, adjust such differences, and such adjustment shall be final. The Commission shall have all the powers that may be conferred upon a Commissioner appointed under the Act respecting Enquiries Concerning Public Matters.

9. This agreement shall extend to, be binding upon, and enure to the benefit of the successors and assigns of the parties hereto.

In witness whereof the Commission and the Corporation have respectively affixed their corporate seals and the hands of their proper officers.

HYDRO-ELECTRIC POWER COMMISSION OF ONTARIO.

(Sgd.) A. Beck, *Chairman.*
(Sgd.) W. W. Pope, *Secretary.*
(Seal.)

THE MUNICIPAL CORPORATION OF THE TOWN OF ARTHUR.

(Sgd.) D. Brocklebank, *Reeve.*
(Sgd.) D. T. Small, *Clerk.*
(Seal.)

SCHEDULE "F."

This indenture made in duplicate the thirteenth day of March in the year of our Lord, One thousand nine hundred and sixteen.

Between

The Hydro-Electric Power Commission of Ontario, hereinafter called the "Commission," party of the first part;

and

The Municipal Corporation of the Village of Tara, hereinafter called the "Corporation," party of the second part.

Whereas, pursuant to "An Act to provide for the Transmission of Electrical power to Municipalities, known as *The Power Commission Act*, and amendments thereto," the Corporation applied to the Commission for a supply of power, and the Commission furnished the Corporation with estimates of the total cost of such power, ready for distribution within the limits of the Corporation (and the electors of the Corporation consented to the By-laws authorizing the Corporation to enter into a contract with the Commission for such power).

1. Now therefore this indenture witnesseth that in consideration of the premises and of the agreement of the Corporation herein set forth, subject to the provisions of the said Act and amendments thereto, the Commission agrees with the Corporation:

(*a*) To reserve and deliver at the earliest possible date 100 h.p. or more of electrical power to the Corporation.

(*b*) At the expiration of reasonable notice in writing, which may be given by the Corporation from time to time during the continuance of this agreement, to reserve and deliver to the Corporation additional electric power when called for.

(*c*) To use at all times first-class, modern, standard commercial apparatus and plant, and to exercise all due skill and diligence so as to secure satisfactory operation of the plant and apparatus of the Corporation.

(*d*) To deliver commercially continuous 24-hour power every day in the year to the Corporation at the distribution bus bars in the Commission's substation within the Corporation's limits.

2. In consideration of the premises and of the agreement herein set forth, the Corporation agrees with the Commission—

(*a*) To use all diligence by every lawful means in its power to prepare for the receipt and use of the power dealt with by this agreement so as to be able to receive power when the Commission is ready to deliver same.

(*b*) To pay annually, interest at rate payable by the Commission upon the Corporation's proportionate part (based on the quantity of electrical

energy or power taken), of all moneys expended by the Commission on capital account for the acquiring of properties and rights, the acquiring and construction of generating plants, transformer stations, transmission lines, distributing stations, and other works necessary for the delivery of said electrical energy or power to the Corporation under the terms of this contract.

Also to pay an annual sinking fund instalment of such amount as to form at the end of 30 years, with accrued interest, a sinking fund sufficient to repay the Corporation's proportionate part, based as aforesaid, of all moneys advanced by the Province of Ontario for the acquiring of properties and rights, the acquiring and construction of generating plants, transformer stations, transmission lines, distributing stations and other works necessary for the delivery of said electrical energy or power, delivered to the Corporation under the terms of this contract. Also to pay the Corporation's proportionate part, based as aforesaid, on the cost of lost power and of the cost of operating, maintaining, repairing, renewing and insuring said generating plants, transformer stations, transmission lines, distributing stations and other necessary works, subject to adjustment under Clause 6 of this agreement.

(*c*) The amounts payable under this contract shall be paid in twelve monthly payments, in gold coin of the present standard of weight and fineness, at the offices of the Commission at Toronto. Bills shall be rendered by the Commission on or before the 5th day and paid by the Corporation on or before the 15th day of each month. If any bill remains unpaid for fifteen days, the Commission may, in addition to all other remedies and without notice, discontinue the supply of power to the Corporation until said bill is paid. No such discontinuance shall relieve the Corporation from the performance of the covenants, provisoes and conditions herein contained. All payments in arrears shall bear interest at the legal rate.

(*d*) To take electric power exclusively from the Commission during the continuance of this agreement.

(*e*) To co-operate by all means in its power at all times with the Commission to increase the quantity of power required from the Commission, and in all other respects to carry out the objects of this agreement, and of the said Act.

(*f*) To pay for three-fourths of the power ordered from time to time by the Corporation and held in reserve for it as herein provided, whether it takes the same or not. When the highest average amount of power taken for any twenty consecutive minutes during any month shall exceed during the twenty consecutive minutes three-fourths of the amount ordered by the Corporation and held in reserve, then the Corporation shall pay for this greater amount during the entire month.

(*g*) If the Corporation during any month takes more than the amount of power ordered and held in reserve for it, as determined by an integrated peak, or highest average, for a period of twenty consecutive minutes, the taking of such excess shall thereafter constitute an obligation on the part of the Corporation to pay for, and on the part of the Commission to hold in reserve, such increased quantity of power in accordance with the terms and conditions of this contract.

(*h*) When the power factor of the highest average amount of power taken for said twenty consecutive minutes falls below 90% the Corporation shall pay for 90% of said power divided by the power factor.

(*i*) To use at all times first-class, modern, standard commercial apparatus and plant, to be approved by the Commission.

(*j*) To exercise all due skill and diligence so as to secure satisfactory operation of the plant and apparatus of the Commission and of the Corporation.

3. This agreement shall remain in force for thirty years from date of the first delivery of power under this contract.

4. The power shall be alternating, three-phase, having a periodicity of approximately 60 cycles per second, and shall be delivered as aforesaid at a voltage suitable for local distribution.

(*a*) That the meters with their series and potential transformers shall be connected at the point of delivery.

(*b*) The maintenance by the Commission of approximately the agreed voltage at approximately the agreed frequency at the substation in the limits of the Corporation shall constitute the supply of all power involved herein and the fulfilment of all operating obligations hereunder, and when voltage and frequency are so maintained, the amount of power, its fluctuations, load factor, power factor, distribution as to phases and all other electric characteristics and qualities, are under the sole control of the Corporation, their agents, customers, apparatus, appliances and circuits.

5. The engineers of the Commission, or one or more of them, or any other person or persons appointed for this purpose by the Commission, shall have the right from time to time during the continuance of this agreement, to inspect the apparatus, plant and property of the Corporation and take records at all reasonable hours.

6. The Commission shall at least annually adjust and apportion the amount or amounts payable by the Municipal Corporation or Corporations for such power and such interest, sinking fund, cost of lost power and cost of generating, operating, maintaining, repairing, renewing and insuring said works.

If at any time any other Municipal Corporation, or pursuant to said Act, any railway or distributing company, or any other Corporation or person, applies to the Commission for a supply of power, the Commission shall notify the applicant and the involved Corporation or Corporations in writing, of a time and place to hear all representations that may be made as to the terms and conditions for such supply.

Without discrimination in favour of the applicants as to the price to be paid, for equal quantities of power, the Commission may supply power upon such terms and conditions as may, having regard to the risk and expense incurred, and paid, and to be paid by the Corporation, appear equitable to the Commission, and are approved by the Lieutenant-Governor in Council.

No such application shall be granted if the said works or any part thereof are not adequate for such supply, or if the supply of the Corporation will be thereby injuriously affected, and no power shall be supplied within the limits of a Municipal Corporation taking power from the Commission at the time of such application, without the written consent of such Corporation.

In determining the quantity of power supplied to a Municipal Corporation, the quantity supplied by the Commission within the limits of the Corporation to any applicant, other than a Municipal Corporation, shall be computed as part of the quantity supplied to such Corporation, but such Corporation shall not be liable for payment for any portion of the power so supplied. No power shall be supplied by the Municipal Corporation to any railway or distributing company without the written consent of the Commission. Power shall not be sold for less than the cost, and there shall be no discrimination as regards price and quantity.

7. It is hereby declared that the Commission is to be a trustee of all property held by the Commission under this agreement for the Corporation or Corporations supplied by the Commission, but the Commission shall be entitled to a lien upon said property for all moneys expended by the Commission under this agreement and not repaid. At the expiration of this agreement the Commission shall determine and adjust the rights of the Corporation and any other (if any) supplied by the Commission, having regard to the amounts paid by them respectively under the terms of this agreement and such other considerations as may appear equitable to the Commission and are approved by the Lieutenant-Governor in Council.

8. If differences arise between Corporations to which the Commission is supplying power, the Commission may upon application fix a time and place and hear all representations that may be made by the parties, and the Commission shall, in a summary manner, when possible, adjust such differences, and such adjustment shall be final. The Commission shall have all the powers that may be conferred upon a Commissioner appointed under the Act respecting Enquiries Concerning Public Matters.

9. This agreement shall extend to, be binding upon, and enure to the benefit of the successors and assigns of the parties hereto.

In witness whereof the Commission and the Corporation have respectively affixed their corporate seals and the hands of their proper officers.

HYDRO-ELECTRIC POWER COMMISSION OF ONTARIO.

(Sgd.) A. Beck, *Chairman.*
(Sgd.) W. W. Pope, *Secretary.*
(Seal.)

THE MUNICIPAL CORPORATION OF THE VILLAGE OF TARA.

(Sgd.) J. E. Grant, *Reeve.*
(Sgd.) W. J. Taylor, *Clerk.*
(Seal.)

SCHEDULE "G."

This Indenture made in duplicate the fifth day of June, in the year of our Lord, One thousand nine hundred and sixteen.

Between

The Hydro-Electric Power Commission of Ontario, hereinafter called the "Commission," party of the first part;

and

The Municipal Corporation of the Village of Grand Valley, hereinafter called the "Corporation," party of the second part.

Whereas, pursuant to "An Act to provide for the Transmission of Electrical power to Municipalities, known as *The Power Commission Act*, and amendments thereto," the Corporation applied to the Commission for a supply of power, and the Commission furnished the Corporation with estimates of the total cost of such power, ready for distribution within the limits of the Corporation (and the electors of the Corporation assented to the By-laws No. 187 and 192, authorizing the Corporation to enter into a contract with the Commission for such power).

1. Now therefore this indenture witnesseth that in consideration of the premises and of the agreement of the Corporation herein set forth, subject to the provisions of the said Act and amendments thereto, the Commission agrees with the Corporation:

(*a*) To reserve and deliver at the earliest possible date 100 h.p. or more of electrical power to the Corporation.

(*b*) At the expiration of reasonable notice in writing, which may be given by the Corporation from time to time during the continuance of this agreement, to reserve and deliver to the Corporation additional electric power when called for.

(*c*) To use at all times first-class, modern, standard commercial apparatus and plant, and to exercise all due skill and diligence so as to secure satisfactory operation of the plant and apparatus of the Corporation.

(*d*) To deliver commercially continuous 24-hour power every day in the year to the Corporation at the distribution bus bars in the Commission's substation within the Corporation's limits.

2. In consideration of the premises and of the agreement herein set forth, the Corporation agrees with the Commission:

(*a*) To use all diligence by every lawful means in its power to prepare for the receipt and use of the power dealt with by this agreement, so as to be able to receive power when the Commission is ready to deliver same.

(*b*) To pay annually, interest at rate payable by the Commission upon the Corporation's proportionate part (based on the quantity of electrical

energy or power taken), of all moneys expended by the Commission on capital account for the acquiring of properties and rights, the acquiring and construction of generating plants, transformer stations, transmission lines, distributing stations, and other works necessary for the delivery of said electrical energy or power to the Corporation under the terms of this contract.

Also to pay an annual sinking fund instalment of such amount as to form at the end of thirty years, with accrued interest, a sinking fund sufficient to repay the Corporation's proportionate part, based as aforesaid, of all moneys advanced by the Province of Ontario for the acquiring of properties and rights, the acquiring and construction of generating plants, transformer stations, transmission lines, distributing stations and other works necessary for the delivery of said electrical energy or power, delivered to the Corporation under the terms of this contract. Also to pay the Corporation's proportionate part, based as aforesaid, on the cost of lost power and of the cost of operating, maintaining, repairing, renewing and insuring said generating plants, transformer stations, transmission lines, distributing stations and other necessary works, subject to adjustment under Clause 6 of this agreement.

(*c*) The amounts payable under this contract shall be paid in twelve monthly payments, in gold coin of the present standard of weight and fineness, at the offices of the Commission at Toronto. Bills shall be rendered by the Commission on or before the 5th day and paid by the Corporation on or before the 15th day of each month. If any bill remains unpaid for fifteen days, the Commission may, in addition to all other remedies and without notice, discontinue the supply of power to the Corporation until said bill is paid. No such discontinuance shall relieve the Corporation from the performance of the covenants, provisoes and conditions herein contained. All payments in arrears shall bear interest at the legal rate.

(*d*) To take electric power exclusively from the Commission during the continuance of this agreement.

(*e*) To co-operate by all means in its power at all times with the Commission to increase the quantity of power required from the Commission, and in all other respects to carry out the objects of this agreement, and of the said Act.

(*f*) To pay for three-fourths of the power ordered from time to time by the Corporation and held in reserve for it as herein provided, whether it takes the same or not. When the highest average amount of power taken for any twenty consecutive minutes during any month shall exceed during the twenty consecutive minutes three-fourths of the amount ordered by the Corporation and held in reserve, then the Corporation shall pay for this greater amount during the entire month.

(*g*) If the Corporation during any month takes more than the amount of power ordered and held in reserve for it, as determined by an integrated peak, or highest average, for a period of twenty consecutive minutes, the taking of such excess shall thereafter constitute an obligation on the part of the Corporation to pay for, and on the part of the Commission to hold in reserve, such increased quantity of power in accordance with the terms and conditions of this contract.

(*h*) When the power factor of the highest average amount of power taken for said twenty consecutive minutes falls below 90% the Corporation shall pay for 90% of said power divided by the power factor.

(*i*) To use at all times first-class, modern, standard commercial apparatus and plant, to be approved by the Commission.

(*j*) To exercise all due skill and diligence so as to secure satisfactory operation of the plant and apparatus of the Commission and of the Corporation.

3. This agreement shall remain in force for thirty years from date of the first delivery of power under this contract.

4. The power shall be alternating, three-phase, having a periodicity of approximately 60 cycles per second, and shall be delivered as aforesaid at a voltage suitable for local distribution.

(*a*) That the meters with their series and potential transformers shall be connected at the point of delivery.

(*b*) The maintenance by the Commission of approximately the agreed voltage at approximately the agreed frequency at the substation in the limits of the Corporation shall constitute the supply of all power involved herein and the fulfilment of all operating obligations hereunder, and when voltage and frequency are so maintained, the amount of power, its fluctuations, load factor, power factor, distribution as to phases and all other electric characteristics and qualities, are under the sole control of the Corporation, their agents, customers, apparatus, appliances and circuits.

5. The Engineers of the Commission, or one or more of them, or any other person or persons appointed for this purpose by the Commission, shall have the right from time to time during the continuance of this agreement, to inspect the apparatus, plant and property of the Corporation and take records at all reasonable hours.

6. The Commission shall at least annually adjust and apportion the amount or amounts payable by the Municipal Corporation or Corporations for such power and such interest, sinking fund, cost of lost power and cost of generating, operating, maintaining, repairing, renewing and insuring said works.

If at any time any other Municipal Corporation, or pursuant to said Act, any railway or distributing company, or any other Corporation or person, applies to the Commission for a supply of power, the Commission shall notify the applicant and the involved Corporation or Corporations in writing, of a time and place to hear all representations that may be made as to the terms and conditions for such supply.

Without discrimination in favour of the applicants as to the price to be paid, for equal quantities of power, the Commission may supply power upon such terms and conditions as may, having regard to the risk and expense incurred, and paid, and to be paid by the Corporation, appear equitable to the Commission, and are approved by the Lieutenant-Governor in Council.

No such application shall be granted if the said works or any part thereof are not adequate for such supply, or if the supply of the Corporation will be thereby injuriously affected, and no power shall be supplied within the limits of a Municipal Corporation taking power from the Commission at the time of such application, without the written consent of such Corporation.

In determining the quantity of power supplied to a Municipal Corporation, the quantity supplied by the Commission within the limits of the Corporation to any applicant, other than a Municipal Corporation, shall be computed as part of the quantity supplied to such Corporation, but such Corporation shall not be liable for payment for any portion of the power so supplied. No power shall be supplied by the Municipal Corporation to any railway or distributing company without the written consent of the Commission. Power shall not be sold for less than the cost, and there shall be no discrimination as regards price and quantity.

7. It is hereby declared that the Commission is to be a trustee of all property held by the Commission under this agreement for the Corporation or Corporations supplied by the Commission, but the Commission shall be entitled to a lien upon said property for all moneys expended by the Commission hnder this agreement and not repaid. At the expiration of this agreement the Commission shall determine and adjust the rights of the Corporation and any other (if any) supplied by the Commission, having regard to the amounts paid by them respectively under the terms of this agreement and such other consideratons as may appear equitable to the Commission and are approved by the Lieutenant-Governor in Council.

8. If differences arise between Corporations to which the Commission is supplying power, the Commission may upon application fix a time and place and hear all representations that may be made by the parties, and the Commission shall, in a summary manner, when possible, adjust such differences, and such adjustment shall be final. The Commission shall have all the powers that may be conferred upon a Commissioner appointed under the Act respecting Enquiries Concerning Public Matters.

9. This agreement shall extend to, be binding upon, and enure to the benefit of the successors and assigns of the parties hereto.

In witness whereof the Commission and the Corporation have respectively affixed their corporate seals and the hands of their proper officers.

HYDRO-ELECTRIC POWER COMMISSION OF ONTARIO.

(Sgd.) A. Beck, *Chairman.*

(Sgd.) W. W. Pope, *Secretary.*

(Seal.)

CORPORATION OF THE VILLAGE OF GRAND VALLEY.

(Sgd.) Alfred Menary, *Reeve.*

(Sgd.) H. Richardson, *Clerk.*

(Seal.)

SCHEDULE "H."

This Agreement made this 18th day of February, A.D. 1916.

Between:

The Hydro-Electric Power Commission of Ontario, herein called the "Commission," party of the First Part;

and

The Municipal Corporation of the Township of Artemesia, herein called the "Corporation," party of the Second Part.

Whereas pursuant to an Act to provide for the transmission of electrical power to the municipalities the Corporation applied to the Commission for a supply of power;

And whereas the Corporation under the provisions of *The Power Commission Act* and amendments thereto, and *The Power Commission Act of 1911, being "An Act to provide for the Local Distribution of Electrical Power,"* has, at the request of a number of ratepayers (petitioners) applied to the Commission for a supply of electrical power or energy, and has passed a By-law No. 30 to authorize the execution of an agreement therefor;

1. Now therefore this indenture witnesseth that in consideration of the premises and of the agreements of the Corporation set forth, subject to the provisions of said Act and amendments and of the said contract, the Commission agrees with the Corporation:—

(*a*) To reserve and deliver at the earliest possible date electrical power to the Corporation as required by the Corporation.

(*b*) At the expiration of thirty (30) days' notice in writing which may be given by the Corporation from time to time during the continuance of this agreement, to reserve and deliver to the Corporation additional electrical power as may be required from time to time.

(*c*) To use at all times first-class, modern, standard commercial apparatus and plant, and to exercise due skill and diligence so as to secure the most perfect operation of the plant and apparatus of the Corporation.

(*d*) Power shall be delivered to the Corporation at approximately 2,2000 or 4,000 volts, or at any other primary voltage that may be available for the Corporation's use.

(*e*) To supply and construct all 2,200, 4,000 or other lines at primary voltage made necessary by contracts for electric service made between the Corporation and residents or users within the township, from the Commission's power station or transformer stations to the service transformers of the Corporation located at such points as the Commission may approve, except in those parts of the township known as Eugenia and Ceylon.

2. In consideration of the premises and of the covenants and agreements herein set forth, the Corporation agree with the Commission:—

(*a*) To use all diligence by every lawful means in its power to prepare for the receipt and use of the power dealt with by this agreement, so as to be able to give notice as specified in paragraph 1 (*b*).

(*b*) Subject to the provisions of paragraph (*g*) herein, to pay the Commission monthly for all power taken, the cost of the power to be delivered by the Commission plus the charges in connection with the delivery of power to the municipality, as outlined in clause 2 (*c*) and (*d*).

(*c*) To pay annually interest at the rate payable by the Commission upon the Corporation's proportionate part (based on the quantity of electrical energy or power taken), of all moneys expended by the Commission on capital account for the acquiring of properties and rights, and acquiring and construction of generating plants, transformer stations, transmission lines, distributing stations and other works necessary for the delivery of said electrical energy or power to the Corporation under the terms of this contract. Also to pay an annual sinking fund instalment of such amounts as to form at the end of thirty (30) years with accrued interest a sinking fund sufficient to repay the Corporation's proportionate part, based as aforesaid, of all moneys advanced by the Province of Ontario for the acquiring of properties and rights, the acquiring and construction of generating plant, transformer stations, transmission lines, distributing stations and other works necessary for delivery of said electrical energy or power delivered to the Corporation under the terms of this contract. Also to pay the Corporation's proportionate part, based as aforesaid, on the cost of lost power and of the cost of operating, maintaining, repairing, renewing and insuring said generating plants, transformer stations, transmission lines, distributing stations and other necessary works. Subject to adjustment under clause 8 of this agreement.

(*d*) In addition to the cost of power and cost of delivering it to the Corporation, as provided for in paragraph 2 (*b*) and (*c*), to pay to the Commission in half-yearly instalments interest and sinking fund on a thirty (30) year basis on all capital invested by the Commission in 2,200 volt, 4,000 volt or other lines of primary voltages as provided for in paragraph 1 (*e*), and to maintain, repair, renew and operate the said lines and set aside a depreciation fund at the rate of 5% per annum on all capital expended by the Commission on such construction.

The payments covering cost of construction of primary lines as outlined in this clause 2 (*d*) shall not apply to the portions of the township known as Eugenia and Ceylon, and the capital cost of all primary and secondary distribution lines in these two localities, including all meters, transformers and other equipment necessary for the distribution systems shall be borne entirely by the Corporation, but shall be constructed by the Commission and the Corporation shall make payment to the Commission within thirty (30) days after rendering of account covering moneys spent by the Commission on construction of said primary and secondary distribution lines including all meters, transformers and other necessary equipment as mentioned above, comprising said distribution systems in Eugenia and Ceylon.

(*e*) The amounts payable in accordance with clauses 2 (*b*), (*c*) and (*d*) shall be paid in gold coin of the present standard of weight and fineness, at the office of the Commission at Toronto, and bills shall be rendered by

the Commission on or before the 5th day and paid by the Corporation on or before the 15th day of each month, except that payments under clause 2 (*d*) shall be made half-yearly. If any bill remains unpaid for 15 days the Commission may, in addition to all other remedies, and without notice, discontinue the supply of power to the Corporation until said bill is paid. No such discontinuance shall relieve the Corporation from the performance of the covenants, provisoes and conditions herein contained, and payments in arrears shall bear interest at the legal rate.

(*f*) To take power exclusively from the Commission during the continuance of this agreement.

(*g*) To pay for three-fourths of the power ordered from time to time by the Corporation and held in reserve for it as herein provided, whether it takes same or not. When the highest average amount of power taken for any twenty consecutive minutes during any month shall exceed during twenty consecutive minutes three-fourths of the amount of power ordered by the Corporation and held in reserve, then the Corporation shall pay for this greater amount during the entire month. If the Corporation during any month takes more than the amount of power ordered and held in reserve for it, as determined by an integrated peak, or the highest average for a period of twenty consecutive minutes, the Corporation shall pay for this greater amount of power during the entire month. The taking of such excess shall therefore constitute an obligation on the part of the Corporation to pay for and on the part of the Commission to hold in reserve an additional block of power in accordance with the terms and conditions of this agreement.

When the power factor of the highest amount of power taken for said twenty consecutive minutes falls below 90% the Corporation shall pay for 90% of the said power factor divided by the power factor.

(*h*) To use at all times first-class, modern, standard commercial apparatus, and plant to be approved by the Commission, and to exercise all due skill and diligence so as to secure the most perfect operation of the plant and apparatus of the Commission and of the Company.

(*i*) To co-operate, by all means in its power, at all times, with the Commission, to increase the quantity of power required from the Commission and in all other respects to carry out the objects of this agreement and of the said Act.

3. This agreement shall remain in force for thirty (30) years from the date of the first delivery of power hereunder.

4. The power shall be three-phase, alternating commercially continuous twenty-four hour power every day of the year, except as provided in paragraph 6, having a periodicity of approximately 60 cycles per second, and shall be delivered as aforesaid at a voltage suitable for distribution within the municipality.

(*a*) That the meters with their series and potential transformers shall be connected at the point of delivery, and shall be subject to test as to accuracy by either party hereto.

(*b*) The maintenance by the Commission of approximately the agreed voltage at approximately the agreed frequency at the point of delivery

to the Corporation shall constitute the supply of all power involved herein and the fulfilment of all operating obligations hereunder; and when voltage and frequency are so maintained, the amount of power, its fluctuations, load factor, power factor, distribution as to phases, and all other electric characteristics and qualities are under the sole control of the Corporation, their agents, customers, apparatus, appliances and circuits.

5. The engineers of the Commission, or one or more of them or any other person or persons appointed for this purpose by the Commission, shall have the right from time to time during the continuance of this agreement, to inspect the apparatus, plant and property of the Corporation and take records at all reasonable hours.

6. In case the Commission should at any time or times be prevented from supplying said power, or any part thereof, or in case the Corporation shall at any time be prevented from taking said power, or any part thereof, by strike, lock-out, fire, invasion, explosion, act of God, or the King's enemies, or any other cause reasonably beyond their control, then the Commission shall not be bound to deliver such power during such times, and the Corporation shall not be bound to pay the price of said power, during such time.

7. The Commission shall at least annually adjust and apportion the amounts payable by municipal corporations for such power and such interest, sinking fund, line loss, and cost of operating, maintaining, repairing, renewing and insuring the lines and works.

8. It is hereby declared that the Commission is to be a trustee of all property held by the Commission under this agreement for the Corporation and other municipal corporations supplied by the Commission, but the Commission shall be entitled to a lien upon said property for all moneys expended by the Commission under this agreement and not repaid. At the expiration of this agreement the Commission shall determine and adjust the rights of the Corporation and other municipal corporations supplied by the Commission, having regard to the amounts paid by them respectively, under the terms of this agreement, and such other considerations, as may appear equitable to the Commission and are approved by the Lieutenant-Governor in Council.

9. If at any time any other municipal corporation or pursuant to said Act, any railway or distributing company, or any other corporation or person, applies to the Commission for a supply of power, the Commission shall notify the applicant and the Corporation in writing, of a time and place and hear all representations that may be made as to the terms and conditions for such supply.

Without discrimination in favor of the applicants as to the price to be paid, for equal quantities of power, the Commission may supply power upon such terms and conditions as may, having regard to the risk and expense incurred, and paid, and to be paid by the Corporation, appear equitable to the Commission, and are approved by the Lieutenant-Governor in Council.

10. In case any municipal corporation, or any person, firm or corporation which shall contract with the Commission or with any municipal corporation for a supply of power furnished to the Commission by the

Company shall suffer damages by the act of neglect of the Company, and such municipal corporation, person, firm or corporation would, if the Company had made the said contracts directly with them have had a right to recover such damages or commence any proceedings or any other remedy, the Commission shall be entitled to commence any such proceedings to bring such action for or on behalf of such municipal corporation, person, firm or corporation, and notwithstanding any act, decision or rule of law to the contrary, the Commission shall be entitled to all the rights and remedies of such municipal corporation, person, firm or corporation, including the right to recover such damages, but no action shall be brought by the Commission until such municipal corporation, person, firm or corporation shall have agreed with the Commission to pay any costs that may be adjudged to be paid if such proceedings or action are unsuccessful. The rights and remedies of any such municipal corporation, person, firm or corporation shall not be hereby prejudiced.

11. If differences arise between corporations to whom the Commission is supplying power, the Commission may, upon application fix a time and place to hear all representations that may be made by the parties and the Commission shall, in a summary manner when possible, adjust such differences and such adjustment shall be final.

The Commission shall have all the powers that may be conferred upon a Commission appointed under *The Act respecting Enquiries Concerning Public Matters.*

12. This agreement shall extend to, be binding upon and enure to the benefit of the successors and assigns of the parties hereto.

In witness whereof the Commission and the Corporation have respectively affixed their corporate seals and the hands of their proper officers.

HYDRO-ELECTRIC POWER COMMISSION OF ONTARIO,

(Sgd.) A. Beck, *Chairman.*

(Seal.)

(Sgd.) W. W. Pope, *Secretary.*

MUNICIPAL CORPORATION OF THE TOWNSHIP OF ARTEMESIA.

(Sgd.) T. R. McKenzie, *Reeve.*

(Seal.)

(Sgd.) W. J. Ballamy, *Clerk.*

SCHEDULE "I."

This agreement made this 6th day of November, A.D. 1916,

Between:

The Hydro-Electric Power Commission of Ontario, herein called the "Commission," party of the First Part;

and

The Municipal Corporation of the Township of Brant in the County of Bruce, herein called the "Corporation," party of the Second Part.

Whereas, pursuant to an Act to provide for the transmission of electrical power to the municipalities, the Corporation applied to the Commission for a supply of power.

And whereas the Corporation, under the provisions of *The Power Commission Act* and amendments thereto, and *The Power Commission Act of 1911*, being "an Act to provide for the Local Distribution of Electrical Power," has, at the request of a number of ratepayers (petitioners), applied to the Commission for a supply of electrical power or energy, and has passed a by-law, No. 89, to authorize the execution of an agreement therefor.

1. Now therefore this indenture witnesseth that in consideration of the premises and of the agreements of the Corporation set forth, subject to the provisions of said Act and amendments, and of the said contract, the Commission agrees with the Corporation:—

(*a*) To reserve and deliver at the earliest possible date electrical power to the Corporation, as required by the Corporation.

(*b*) At the expiration of thirty (30) days' notice in writing, which may be given by the Corporation from time to time during the continuance of this agreement, to reserve and deliver to the Corporation additional electrical power as may be required from time to time.

(*c*) To use at all times first-class, modern, standard commercial apparatus and plant, and to exercise due skill and diligence so as to secure the most perfect operation of the plant and apparatus of the Corporation.

(*d*) Power shall be delivered to the Corporation at approximately 2,200 or 4,000 volts, or at any other primary voltage that may be available for the Corporation's use.

(*e*) To supply and construct all 2,200 volt, 4,000 volt or other lines at primary voltage made necessary by contracts for electric service made between the Corporation and residents or users within the township, from the Commission's power station or transformer stations to the service transformers of the Corporation located at such points as the Commission may approve, except in that part of the township known as Elmwood, and it is hereby understood and agreed upon by both parties hereto that all the cost of the primary, secondary and street lighting, distribution systems located within the hamlet of Elmwood and upon the streets of same, shall

be paid for direct by the Corporation, including all meters, transformers, services, street lighting brackets, poles, wires, cross arms, and any equipment necessary to serve the consumers within the said hamlet of Elmwood.

2. In consideration of the premises and of the covenants and agreements herein set forth, the Corporation agrees with the Commission:—

(*a*) To use all diligence by every lawful means in its power to prepare for the receipt and use of the power dealt with by this agreement, so as to be able to give notice as specified in paragraph 1 (*b*).

(*b*) Subject to the provisions of clause (*g*), section 2 herein, to pay the Commission monthly for all power taken, the cost of the power to be delivered by the Commission, plus the charges in connection with the delivery of power to the municipality, as outlined in clauses 2 (*c*) and (*d*).

(*c*) To pay annually interest at the rate payable by the Commission upon the Corporation's proportionate part (based on the quantity of electrical energy or power taken), of all moneys expended by the Commission on capital account for the acquiring of properties and rights, and acquiring and construction of generating plants, transformer stations, transmission lines, distributing stations and other works necessary for the delivery of said electrical energy or power to the Corporation under the terms of this contract. Also to pay an annual sinking fund instalment of such amount as to form at the end of thirty (30) years, with accrued interest, a sinking fund sufficient to repay the Corporation's proportionate part, based as aforesaid, of all moneys advanced by the Province of Ontario for the acquiring of properties and rights, the acquiring and construction of generating plant, transformer stations, transmission lines, distributing stations and other works necessary for delivery of said electrical energy or power delivered to the Corporation under the terms of this contract. Also to pay the Corporation's proportionate part, based as aforesaid, of the cost of lost power and of the cost of operating, maintaining, repairing, renewing and insuring said generating plants, transformer stations, transmission lines, distributing stations, and other necessary works. Subject to adjustment under clause 8 of this agreement.

(*d*) In addition to the cost of power and cost of delivering it to the Corporation, as provided for in paragraph 2 (*b*) and (*c*), to pay to the Commission in half-yearly instalments interest and sinking fund on a thirty (30) year basis on all capital invested by the Commission in 2,200 volt, 4,000 volt, or other lines of primary voltage as provided for in paragraph 1 (*e*), and to maintain, repair, renew and operate the said lines and set aside a depreciation fund at the rate of 5 per cent. per annum on all capital expended by the Commission on such construction.

The payments covering cost of construction of primary lines as outlined in this clause 2 (*d*) shall not apply to the portion of the township known as Elmwood, and the capital cost of all primary, secondary and street lighting and distribution lines in this locality, including all meters, transformers, and other necessary equipment for the distribution system, shall be borne entirely by the Corporation, but shall be constructed by the Commission and the Corporation shall make payment to the Commission within thirty (30) days after rendering of account covering moneys spent by the Commission on construction of said primary, secondary, and street

lighting distribution lines, including all meters, transformers and other necessary equipment as mentioned above, comprising the said distribution system in the hamlet of Elmwood.

(*e*) The amounts payable in accordance with clauses 2 (*b*), (*c*) and (*d*) shall be paid in gold coin of the present standard of weight and fineness, at the office of the Commission at Toronto, and bills shall be rendered by the Commission on or before the 5th day and paid by the Corporation on or before the 15th day of each month, except that payments under clause 2 (*d*) shall be made half-yearly. If any bill remains unpaid for 15 days the Commission may, in addition to all other remedies, and without notice, discontinue the supply of power to the Corporation until said bill is paid. No such discontinuance shall relieve the Corporation from the performance of the covenants, provisoes and conditions herein contained, and payments in arrears shall bear interest at the legal rate.

(*f*) To take power exclusively from the Commission during the continuance of this agreement.

(*g*) To pay for three-fourths of the power ordered from time to time by the Corporation and held in reserve for it as herein provided, whether it takes same or not. When the highest average amount of power taken for any twenty (20) consecutive minutes during any month shall exceed during twenty (20) consecutive minutes three-fourths of the amount of power ordered by the Corporation and held in reserve, then the Corporation shall pay for this greater amount during the entire month. If the Corporation during any month takes more than the amount of power ordered and held in reserve for it, as determined by an integrated peak, or the highest average for a period of twenty (20) consecutive minutes, the Corporation shall pay for this greater amount of power during the entire month. The taking of such excess shall therefore constitute an obligation on the part of the Corporation to pay for and on the part of the Commission to hold in reserve, an additional block of power in accordance with the terms and conditions of this agreement.

When the power factor at any time falls below ninety per cent. (90%), the Corporation shall pay for ninety per cent. (90%) of the kilovolt amperes, providing that said ninety per cent. (90%) of said kilovolt amperes is greater than the maximum kilowatt for any twenty (20) minute period during the month.

(*h*) To use at all times first-class, modern, standard, commercial apparatus and plant to be approved by the Commission and to exercise all due skill and diligence so as to secure the most perfect operation of the plant and apparatus of the Commission and of the Corporation.

(*i*) To co-operate by all means in its power, at all times, with the Commission, to increase the quantity of power required from the Commission and in all other respects to carry out the objects of this agreement and of the said Act.

3. This agreement shall remain in force for thirty (30) years from the date of the first delivery of power hereunder.

4. The power shall be three-phase, alternating commercially continuous twenty-four hour power every day of the year, except as provided in

paragraph 6, having a periodicity of approximately 60 cycles per second, and shall be delivered as aforesaid at a voltage suitable for distribution within the municipality.

(*a*) That the meters with their series and potential transformers shall be connected at the point of delivery, and shall be subject to test as to accuracy by either party hereto.

(*b*) The maintenance by the Commission of approximately the agreed voltage at approximately the agreed frequency at the point of delivery to the Corporation shall constitute the supply of all power involved herein and the fulfilment of all operating obligations hereunder; and when voltage and frequency are so maintained, the amount of power, its fluctuations, load factor, power factor, distribution as to phases, and all other electric characteristics and qualities are under the sole control of the Corporation, their agents, customers, apparatus, appliances and circuits.

5. The Engineers of the Commission, or one or more of them, or any other person or persons appointed for this purpose by the Commission, shall have the right, from time to time during the continuance of this agreement, to inspect the apparatus, plant and property of the Corporation and take records at all reasonable hours.

6. In case the Commission should at any time or times be prevented from supplying said power, or any part thereof, or in case the Corporation shall at any time be prevented from taking said power, or any part thereof, by strike, lock-out, fire, invasion, explosion, act of God, or the King's enemies, or any other cause reasonably beyond their control, then the Commission shall not be bound to deliver such power during such times, and the Corporation shall not be bound to pay the price of said power, during such times.

7. The Commission shall at least annually adjust and apportion the amounts payable by municipal corporations for such power and such interest, sinking fund, line loss, and cost of operating, maintaining, repairing, renewing and insuring the lines and works.

8. It is hereby declared that the Commission is to be a trustee of all property held by the Commission under this agreement for the Corporation and other municipal corporations supplied by the Commission, but the Commission shall be entitled to a lien upon said property upon all moneys expended by the Commission under this agreement and not repaid. At the expiration of this agreement the Commission shall determine and adjust the rights of the Corporation and other municipal corporations supplied by the Commission, having regard to the amounts paid by them respectively, under the terms of this agreement, and such other considerations, as may appear equitable to the Commission and are approved by the Lieutenant-Governor in Council.

9. If at any time any other municipal corporation or pursuant to said Act, any railway or distributing company, or any other corporation or person, applies to the Commission for a supply of power, the Commission shall notify the applicant and the corporation in writing, of a time and place and hear all representations that may be made as to the terms and conditions for such supply.

Without discrimination in favour of the applicants as to the price to be paid, for equal quantities of power, the Commission may supply power upon such terms and conditions as may, having regard to the risk and expense incurred, and paid, and to be paid by the Corporation, appear equitable to the Commission, and are approved by the Lieutenant-Governor in Council.

10. If differences arise between corporations to whom the Commission is supplying power, the Commission may, upon application, fix a time and place to hear all representations that may be made by the parties and the Commission shall, in a summary manner, when possible, adjust such differences and such adjustment shall be final.

The Commission shall have all the powers that may be conferred upon a Commissioner appointed under *The Act respecting Enquiries Concerning Public Matters.*

11. This agreement shall extend to, be binding upon and enure to the benefit of the successors and assigns of the parties hereto.

In witness whereof the Commission and the Corporation have respectively affixed their corporate seals and the hands of their proper officers.

HYDRO-ELECTRIC POWER COMMISSION OF ONTARIO,

(Sgd.) A. Beck, *Chairman.*

(Seal.)

(Sgd.) W. W. Pope, *Secretary.*

THE MUNICIPAL CORPORATION OF THE TOWNSHIP OF BRANT IN THE COUNTY OF BRUCE.

(Sgd.) R. S. Nesbitt, *Reeve.*

(Seal.)

(Sgd.) M. A. McCallum, *Clerk.*

SCHEDULE "J."

This Agreement made this 11th day of November, A.D. 1916,

Between:

The Hydro-Electric Power Commission of Ontario, herein called the "Commission," party of the First Part.

and

The Municipal Corporation of the Township of Bentinck in the County of Grey, herein called the "Corporation," party of the Second Part.

Whereas, pursuant to an Act to provide for the Transmission of Electrical Power to the Municipalities, the Corporation applied to the Commission for a supply of power;

And whereas the Corporation, under the provisions of *The Power Commission* Act and amendments thereto and *The Power Commission Act of 1911*, being "An Act to Provide for the Local Distribution of Electrical Power," has, at the request of a number of ratepayers (petitioners) applied to the Commission for a supply of electrical power or energy, and has passed a By-law No. 7 to authorize the execution of an agreement therefor.

1. Now, therefore, this indenture witnesseth that, in consideration of the premises and of the agreements of the Corporation set forth, subject to the provisions of said Act and amendments and of the said contract, the Commission agrees with the Corporation:—

(*a*) To reserve and deliver at the earliest possible date electrical power to the Corporation as required by the Corporation.

(*b*) At the expiration of thirty (30) days' notice in writing, which may be given by the Corporation from time to time during the continuance of this agreement, to reserve and deliver to the Corporation additional electrical power as may be required from time to time.

(*c*) To use at all times first-class, modern, standard commercial apparatus and plant, and to exercise due skill and diligence so as to secure the most perfect operation of the plant and apparatus of the Corporation.

(*d*) Power shall be delivered to the Corporation at approximately 2,200 or 4,000 volts, or at any other primary voltage that may be available for the Corporation's use.

(*e*) To supply and construct all 2,200 volt, 4,000 volt or other lines at primary voltage made necessary by contracts for electric service made between the Corporation and residents or users within the Township, from the Commission's power station or transformer stations to the service transformers of the Corporation located at such points as the Commission may approve, except in that part of the Township known as Elmwood, and it is hereby understood and agreed upon by both parties hereto that all of the cost of the primary, secondary, and street lighting distribution systems located within the hamlet of Elmwood and upon the streets of same, shall be paid for direct by the Corporation, including all meters, transformers, services, street lighting brackets, poles, wires, cross arms, and any equipment necessary to serve the consumers within the said hamlet of Elmwood.

2. In consideration of the premises and of the covenants and agreements herein set forth, the Corporation agrees with the Commission:—

(*a*) To use all diligence by every lawful means in its power to prepare for the receipt and use of the power dealt with by this agreement, so as to be able to give notice as specified in paragraph 1 (*b*).

(*b*) Subject to the provisions of clause (*g*), section 2 herein, to pay the Commission monthly for all power taken, the cost of the power to be delivered by the Commission, plus the charges in connection with the delivery of power to the Municipality, as outlined in clauses 2 (*c*) and (*d*).

(*c*) To pay annually interest at the rate payable by the Commission upon the Corporation's proportionate part (based on the quantity of electrical energy or power taken), of all moneys expended by the Commission

on capital account for the acquiring of properties and rights, and acquiring and construction of generating plants, transformer stations, transmission lines, distributing stations and other works necessary for the delivery of said electrical energy or power to the Corporation under the terms of this contract. Also to pay an annual sinking fund instalment of such amount as to form at the end of thirty (30) years with accrued interest a sinking fund sufficient to repay the Corporation's proportionate part, based as aforesaid, of all moneys advanced by the Province of Ontario for the acquiring of properties and rights, the acquiring and construction of generating plant, transformer stations, transmission lines, distributing stations and other works necessary for delivery of said electrical energy or power delivered to the Corporation under the terms of this contract. Also to pay the Corporation's proportionate part, based as aforesaid, of the cost of lost power and of the cost of operating, maintaining, repairing, renewing and insuring said generating plants, transformer stations, transmission lines, distributing stations and other necessary works. Subject to adjustment under clause 8 of this agreement.

(*d*) In addition to the cost of power and cost of delivering it to the Corporation, as provided for in paragraph 2 (*b*) and (*c*), to pay to the Commission in half-yearly instalments interest and sinking fund on a thirty (30) year basis on all capital invested by the Commission in 2,200 volt, 4,000 volt or other lines of primary voltage as provided for in paragraph 1 (*e*), and to maintain, repair, renew and operate the said lines and set aside a depreciation fund at the rate of 5 per cent. per annum on all capital expended by the Commission on such construction.

The payments covering cost of construction of primary lines as outlined in this clause 2 (*d*) shall not apply to the portion of the Township known as Elmwood and the capital cost of all primary, secondary and street lighting and distribution lines in this locality, including all meters, transformers, and other necessary equipment for the distribution system, shall be borne entirely by the Corporation, but shall be constructed by the Commission and the Corporation shall make payment to the Commission within thirty (30) days after rendering of account, covering moneys spent by the Commission on construction of said primary, secondary and street lighting distribution lines, including all meters, transformers and other necessary equipment as mentioned above, comprising the said distribution system in the hamlet of Elmwood.

(*e*) The amounts payable in accordance with clauses 2 (*b*), (*c*) and (*d*) shall be paid in gold coin of the present standard of weight and fineness, at the office of the Commission at Toronto, and bills shall be rendered by the Commission on or before the 5th day, and paid by the Corporation on or before the 15th day of each month, except that payments under clause 2 (*d*) shall be made half-yearly. If any bill remains unpaid for fifteen days the Commission may, in addition to all other remedies, and without notice, discontinue the supply of power to the Corporation until said bill is paid. No such discontinuance shall relieve the Corporation from the performance of the covenants, provisoes and conditions herein contained, and payments in arrears shall bear interest at the legal rate.

(*f*) To take power exclusively from the Commission during the continuance of this agreement.

(*g*) To pay for three-fourths of the power ordered from time to time by the Corporation and held in reserve for it as herein provided, whether it takes same or not. When the highest average amount of power taken

for any twenty (20) consecutive minutes during any month shall exceed during twenty (20) consecutive minutes three-fourths of the amount of power rendered by the Corporation and held in reserve, then the Corporation shall pay for this greater amount during the entire month. If the Corporation during any month takes more than the amount of power ordered and held in reserve for it, as determined by an integrated peak, or the highest average for a period of twenty (20) consecutive minutes, the Corporation shall pay for this greater amount of power during the entire month. The taking of such excess shall, therefore, constitute an obligation on the part of the Corporation to pay for and on the part of the Commission to hold in reserve an additional block of power in accordance with the terms and conditions of this agreement.

When the power factor at any time falls below ninety per cent. (90%), the Corporation shall pay for ninety per cent. (90%) of the kilovolt amperes, providing that said ninety per cent. (90%) of said kilovolt amperes is greater than the maximum kilowatts for any twenty (20) minute period during the month.

(*h*) To use at all times first-class, modern, standard, commercial apparatus and plant to be approved by the Commission and to exercise all due skill and diligence, so as to secure the most perfect operation of the plant and apparatus of the Commission and of the Corporation.

(*i*) To co-operate by all means in its power, at all times, with the Commission, to increase the quantity of power required from the Commission and in all other respects to carry out the objects of this agreement and of the said Act.

3. This agreement shall remain in force for thirty (30) years from the date of the first delivery of power hereunder.

4. The power shall be three-phase, alternating commercially continuous twenty-four hour power every day of the year, except as provided in paragraph 6, having a periodicity of approximately 60 cycles per second, and shall be delivered as aforesaid at a voltage suitable for distribution within the municipality.

(*a*) That the meters with their series and potential transformers shall be connected at the point of delivery, and shall be subject to test as to accuracy by either party hereto.

(*b*) The maintenance by the Commission of approximately the agreed voltage at approximately the agreed frequency at the point of delivery to the Corporation shall constitute the supply of all power involved herein and the fulfilment of all operating obligations hereunder; and when voltage and frequency are so maintained, the amount of power, its fluctuations, load factor, power factor, distribution as to phases, and all other electric characteristics and qualities are under the sole control of the Corporation, their agents, customers, apparatus, appliances and circuits.

5. The Engineers of the Commission, or one or more of them, or any other person or persons appointed for this purpose by the Commission, shall have the right from time to time during the continuance of this agreement, to inspect the apparatus, plant and property of the Corporation and take records at all reasonable hours.

6. In case the Commission should at any time or times be prevented from supplying said power, or any part thereof, or in case the Corporation shall at any time be prevented from taking said power, or any part thereof, by strike, lock-out, fire, invasion, explosion, act of God, or the King's enemies, or any other cause reasonably beyond their control, then the Commission shall not be bound to deliver such power during such times, and the Corporation shall not be bound to pay the price of said power, during such times.

7. The Commission shall at least annually adjust and apportion the amounts payable by municipal corporations for such power and such interest, sinking fund, line loss, and cost of operating, maintaining, repairing, renewing and insuring the lines and works.

8. It is hereby declared that the Commission is to be a trustee of all property held by the Commission under this agreement for the Corporation and other municipal corporations supplied by the Commission, but the Commission shall be entitled to a lien upon said property for all moneys expended by the Commission under this agreement and not repaid. At the expiration of this agreement the Commission shall determine and adjust the rights of the Corporation and other municipal corporations supplied by the Commission, having regard to the amounts paid by them, respectively, under the terms of this agreement, and such other considerations, as may appear equitable to the Commission and are approved by the Lieutenant-Governor in Council.

9. If at any time any other municipal corporation or pursuant to said Act, any railway or distributing company, or any other corporation or person, applies to the Commission for a supply of power, the Commission shall notify the applicant and the Corporation in writing, of a time and place and hear all representations that may be made as to the terms and conditions of such supply.

Without discrimination in favour of the applicants as to the price to be paid, for equal quantities of power, the Commission may supply power upon such terms and conditions as may, having regard to the risk and expense incurred, and paid, and to be paid by the Corporation, appear equitable to the Commission, and are approved by the Lieutenant-Governor in Council.

10. If differences arise between corporations to whom the Commission is supplying power, the Commission may, upon application, fix a time and place to hear all representations that may be made by the parties, and the Commission shall, in a summary manner, when possible, adjust such differences, and such adjustment shall be final.

The Commission shall have all the powers that may be conferred upon a Commissioner appointed under *The Act respecting Enquiries Concerning Public Matters.*

11. This agreement shall extend to, be binding upon and enure to the benefit of the successors and assigns of the parties hereto.

In witness whereof the Commission and the Corporation have respectively affixed their corporate seals and the hands of their proper officers.

HYDRO-ELECTRIC POWER COMMISSION OF ONTARIO,

(Sgd.) A. Beck, *Chairman.*

(Seal.) (Sgd.) W. W. Pope, *Secretary.*

MUNICIPAL CORPORATION OF THE TOWNSHIP OF BENTINCK IN THE COUNTY OF GREY.

(Sgd.) George Brown, *Reeve.*

(Seal.) (Sgd.) Jno. Herbert Chittick, *Clerk.*

The Legislature also passed the Act, set out hereafter, entitled "*An Act to amend The Water Powers Regulation Act.*"

An Act to amend The Water Powers Regulation Act.

Assented to 12th April, 1917.

HIS MAJESTY, by and with the advice and consent of the Legislative Assembly of the Province of Ontario, enacts as follows:—

Short title.

1. This Act may be cited as *The Water Powers Regulation Act, 1917.*

6 Geo. V. c. 21, amended.

2. *The Water Powers Regulation Act, 1916,* is amended by adding thereto the following section:—

Report of Inspector that owner is exceeding his rights as to development.

13.—(1) Where the inspector reports that the owner of a water power,

(*a*) is diverting or using more water than such owner is entitled to divert or use; or

(*b*) is developing or generating a greater amount of power in horse-power, than such owner is entitled to develop or generate; or

(*c*) has installed works and equipment capable of developing or generating a greater amount of power in horse-power than such owner is entitled to develop or generate,

Appointment of Commission. Rev. Stat. c. 18.

the Lieutenant-Governor in Council may appoint three commissioners, who shall be Judges of the Supreme Court of Ontario, to hold an enquiry under *The Public Enquiries Act,* and report to the Lieutenant-Governor in Council as to,

(*a*) the quantity of water in cubic feet per second which such owner is entitled to divert or use;

(*b*) the amount of power in horse-power which such owner is entitled to develop or generate;

(*c*) the extent, if any, by which the capacity of the works installed or equipped by the owner, exceeds the amount of power in horse-power which the owner is entitled to develop or generate; and

(*d*) as to the price and terms and conditions upon which having regard to all the circumstances and to the rights of the owner as ascertained by the commissioners, the

power to the extent of such excess should be delivered to the Hydro-Electric Power Commission of Ontario as hereinafter provided; and

(*e*) as to such other matters connected with or arising out of the subject matter of the references as they may deem expedient.

Where Commission finds that owner is exceeding his rights.

(2) If the Commissioners find that the owner is diverting or using more water than he is entitled to divert or use, or is developing or generating a greater amount of power in horse-power than he is entitled to develop or generate, or that he has installed and equipped works exceeding in capacity the amount of power which he is entitled to develop or generate, the Lieutenant-Governor in Council may order the owner to deliver to the Hydro-Electric Power Commission of Ontario, upon the date named in the order, such amount of electrical power or energy as shall equal such excess as found by the report of the Commissioners, or to operate the works of the owner to their full capacity and to deliver such excess power to the Hydro-Electric Power Commission of Ontario.

Order requiring delivery of surplus power to H.-E. P. Commission.

Penalty for disobedience to order.

(3) If the owner refuses or neglects to deliver such power after notice in writing so to do, he shall incur a penalty of $1,000 per diem for every day during which such neglect or default continues, to be recoverable by action in the Supreme Court at the suit of the Attorney-General of Ontario.

Other liabilities of owner not affected.

(4) Nothing in this section contained shall affect or diminish any duty or obligation as to payment of any penalty or rental to which the owner might otherwise be liable for exceeding the amount of power which he is entitled to develop or generate. and all such penalties may be collected and all such rentals shall be due and payable and the like proceedings may be taken by the Crown or by any commission or other public body from which the rights or franchises of the owner are derived, as if this Act had not been passed.

An Act was also passed authorizing the construction and operation of works for the development of electrical energy at Niagara Falls.

An Act to authorize the Construction and Operation of Works for the Development of Electrical Power and Energy in the Vicinity of Niagara Falls by the Hydro-Electric Power Commission of Ontario on behalf of Certain Municipal Corporations.

Assented to 12th April, 1917.

HIS MAJESTY, by and with the advice and consent of the Legislative Assembly of the Province of Ontario, enacts as follows:—

Short title.

1. This Act may be cited as *The Ontario Niagara Development Act, 1917.*

Interpretation.

2. In this Act,

"Commission."

(*a*) "Commission" shall mean the Hydro-Electric Power Commission of Ontario;

"Government."

(*b*) "Government" shall mean the Lieutenant-Governor in Council acting for and on behalf of the Province of Ontario.

Commission authorized to construct and operate works.

3. The Commission shall have and may exercise all the powers set out in section 3 of *The Ontario Niagara Development Act* for the construction and operation of the works in the said section mentioned, for the supply of electrical or pneumatic power or energy to municipal corporations which have heretofore entered or may hereafter enter into contracts with the Commission for the supply of electrical or pneumatic power or energy from the Niagara River or Welland River.

Purchase of works authorized.

4. For the purpose of securing a supply of electrical power or energy from the waters of the Niagara River or Welland River, the Commission with the approval of the Lieutenant-Governor in Council may exercise any of the powers set out in clauses *a* to *h* of section 8 of *The Power Commission Act.*

Cost of power at place of development.

5.—(1) Notwithstanding anything contained in any contract heretofore entered into between the Commission and any municipal corporation or corporations or in any general or special Act fixing the maximum price of power to municipal corporations at Niagara Falls, every municipal corporation which has heretofore entered into or which may hereafter enter into a contract for the supply of electrical or pneumatic power or energy by the Commission from the Niagara River, shall pay to the Commission a sum equal to the average cost per horse-power to the Commission of all the power supplied to the municipal corporations under contract with the Commission for the supply of power from Niagara Falls and the vicinity.

(2) In fixing the amount per horse-power so payable by a municipal corporation, the Commission shall take into account the amount payable per horse-power by the Commission to any company or individual operating works for the development of power from Niagara Falls and the vicinity, and the amount required for payment of interest on the sums expended by the Commission upon the construction and equipment of the works, and to form a sinking fund sufficient to provide for the repayment of such amounts and to provide renewals and such other charges as the Commission may deem necessary and proper. Considerations in fixing cost to municipalities.

(3) The cost to municipal corporations of the power supplied to them by the Commission from any source at Niagara Falls, or in the vicinity of the Niagara River, shall be annually adjusted and apportioned by the Commission as provided by *The Power Commission Act*. Annual adjustment of cost. Rev. Stat. c. 39.

(4) The column No. 3 in Schedule "B" of the agreement dated the 4th day of May, 1908, and set out in Schedule "A" of *The Power Commission Amendment Act, 1909*, is struck out and the following substituted therefor:— 9 Edw. VII, c. 19, Schedule amended.

MAXIMUM PRICE OF POWER AT NIAGARA FALLS.

"The average cost per horse-power to the Commission of power developed by the Commission or procured under contract with any corporation or individual developing power at Niagara Falls, to be annually adjusted and apportioned by the Commission as set out in section 8 of *The Ontario Niagara Development Act, 1917*."

(5) Except as qualified or amended by this Act, all the terms of the said agreement of the 4th day of May, 1908, shall continue in force and apply as far as practicable in the same manner and to the same extent as if this Act had not been passed. Agreement of 4th May, 1908, as amended, to be in force.

6.—(1) It is hereby declared that the Commission is to be a trustee of all the works constructed or acquired under the authority of this Act for the municipal corporations which have heretofore entered or may hereafter enter into contracts with the Commission for a supply of electrical power or energy from Niagara Falls or the vicinity, but the Commission shall be entitled to a lien upon the said works until all sums expended by the Commission on account of the construction and equipment of such works have been paid. Commission to hold works as trustee for municipalities.

(2) Upon the payment of the amounts expended by the Commission upon the construction and equipment of the works, the Commission shall determine and adjust the rights of the municipal corporations, having regard to the amounts paid by them respectively, and such other considerations as may appear equitable to the Commission and are approved by the Lieutenant-Governor in Council. Adjustment of rights of municipal corporations.

Contracts with companies, etc.

7.—(1) Subject to the approval of the Lieutenant-Governor in Council, the Commission may contract from time to time with any company or individual for the supply of electrical power or energy from the works constructed or acquired under the authority of this Act to such company or individual.

Application of profits.

(2) Any nett profit made by the Commission in supplying power under subsection 1, after making provision for the cost of acquiring, constructing and maintaining the works by means of which the power or energy is supplied, shall be applied in payment of the cost of maintaining the works constructed or acquired and operated by the Commission.

Park Commissioners may convey lands to Commission.

8.—(1) The Commissioners for the Queen Victoria Niagara Falls Park may convey to the Commission such lands in what is commonly known as the Chain Reserve on the banks of the Niagara River, as may be required for the purposes of the works authorized in section 3 of this Act, and any portion of the fore-shore or bank of the Niagara River which lies in front of the land forming the said Chain Reservation, and the said Commissioners may enter into an agreement with the Commission to take over any lands acquired by the Commission and not actually in use for the purposes of the Commission, and to lay out, fence, improve and care for such lands as part of the Queen Victoria Niagara Falls Park, but the terms of every such conveyance and agreement shall be subject to the approval of the Lieutenant-Governor in Council.

Authority to execute necessary instruments.

(2) The Commissioners for the Queen Victoria Niagara Falls Park and the Commission shall have authority, subject to the approval of the Lieutenant-Governor in Council, to execute all necessary conveyances and other instruments for the purpose of carrying out any agreement entered into under subsection 1.

Issue of bonds by Commission.

9.—(1) The Commission, with the approval of the Lieutenant-Governor in Council, may issue bonds, debentures or other securities of the Commission for any of the purposes set out in sections 3 and 4 and in such form, and containing such terms, and at such rate of interest and payable in such manner and at such time or times as the Lieutenant-Governor in Council may determine.

Provincial guarantee of bonds.

(2) Section 14*c* of *The Power Commission Act* shall apply to the bonds, debentures and other securities which may be issued by the Commission under the authority of subsection 1.

An Act was also passed amending *The Public Utilities Act* and contains references to Hydro-Electric Power Commission matters.

An Act to amend *The Public Utilities Act.*

Assented to 12th April, 1917.

HIS MAJESTY, by and with the advice and consent of the Legislative Assembly of the Province of Ontario, enacts as follows:—

1. Section 32 of *The Public Utilities Act* is repealed and the following substituted therefor:— Rev. Stat. c. 204, s. 32, repealed.

32. Subject to the provisions of section 39 of *The Power Commission Act,* and notwithstanding anything in *The Municipal Act* contained, revenues arising from supplying any public utility or from the property connected with any public utility work, after providing for the expenses and maintenance of the works, shall be paid over to the treasurer of the municipality to be applied annually to the reduction or extinguishment of the rates required to be levied under any by-law for the issue of debentures of the municipality for the construction, extension or improvement of the works, and it shall not be necessary to levy any general rate to provide for sinking fund and interest or other payments on account of such debentures, except to the extent to which the revenues on hand are insufficient to meet the annual payments falling due on account of principal and interest of the debentures. Application of revenue—from public utility.

2. Subsection 1 of section 34 of *The Public Utilities Act* as amended by section 29 of *The Statute Law Amendment Act, 1916,* is repealed and the following substituted therefor:— Rev. Stat. c. 204, s. 34, subs. 1, repealed.

(1) Subject to the provisions of subsections 1*a* to 1*e*, the council of a municipal corporation which owns or operates works for the production, manufacture or supply of any public utility or is about to establish such works, and the council of a township corporation which has entered into a contract with the Hydro-Electric Power Commission of Ontario for a supply of electrical power or energy in the township, may, by by-law passed with the assent of the municipal electors, provide for entrusting the construction of the works and the control and management of the same to a commission to be called "The Public Utilities Commission of the (*naming the municipality*)," or in the case of such township, "The Hydro-Electric Commission of the Township of (*naming the township*)," or to a commission established under this Part. Establishment of municipal commission.

Appointment of commission for village.

Rev. Stat. c. 39.

(1*a*) Where the corporation of a village has entered into a contract with the Hydro-Electric Power Commission of Ontario, under *The Power Commission Act,* for a supply of electrical power or energy a commission may be established by by-law of the council under the provisions of this Part for the control and management of the construction, operation and maintenance of all works undertaken by the corporation for the distribution and supply of such electrical power or energy, and it shall not be necessary that such by-law receive the assent of the electors.

Village commissions heretofore established.

(1*b*) Every such commission heretofore established by the council of a village shall be deemed to have been lawfully established, and the by-law establishing such commission shall be deemed to be and to have been legal, valid and binding from the time of the passing thereof, notwithstanding that such by-law was passed and such commission was established without the assent of the electors first having been obtained.

Repeal of village by-law establishing commission.

(1*c*) A by-law passed by the council of a village for the establishment of a commission without the assent of the electors may be repealed by the council at any time and it shall not be necessary to obtain the assent of the electors to such repeal.

Assent of electors.

(1*d*) Where a by-law establishing a commission in a village has been passed with the assent of the electors the by-law may be repealed with the like assent.

Effect of repeal.

(1*e*) Upon the repeal of a by-law establishing a commission under this section, the control and management of the works shall be vested in the council and the commission shall cease to exist.

Rev. Stat. c. 204, s. 38, amended.

3. Section 38 of *The Public Utilities Act* is amended by adding thereto the following subsection:—

Salaries of municipal commissioners to be approved by Commission.

(2) Where a commission is established which has the control and management of works constructed for the distribution of electrical power or energy supplied by the Hydro-Electric Power Commission of Ontario, the salary or other remuneration of the commissioners, so far as the same is chargeable to such works, shall be subject to the approval of the Hydro-Electric Power Commission of Ontario.

Rev. Stat. c. 204, s. 45, subs. 3, amended.

4. Subsection 3 of section 45 of *The Public Utilities Act* is amended by inserting after the word "utility" in the sixth line thereof the words, "for the purpose of cutting off the supply of such utility or of making an inspection from time to time to determine whether such utility has been or is being unlawfully used or."

The following agreement for the Purchase of Stock in Company by the Hydro-Electric Power Commission was entered into:—

AGREEMENT made this twelfth day of April, A.D. 1917;

BETWEEN:

JOHN JOSEPH ALBRIGHT, of Buffalo, in the State of New York, on behalf of himself and other Stockholders of The Ontario Power Company of Niagara Falls (hereinafter called the Vendor),

of the First Part;

—and—

THE HYDRO-ELECTRIC POWER COMMISSION OF ONTARIO (hereinafter called the Purchaser),

of the Second Part;

—and—

HIS MAJESTY THE KING, herein represented by the Lieutenant-Governor in Council of the Province of Ontario, acting by Sir William Hearst, Prime Minister of the said Province, (hereinafter called the Guarantor),

of the Third Part;

—and—

THE ONTARIO POWER COMPANY OF NIAGARA FALLS (hereinafter called the Power Company),

of the Fourth Part;

—and—

THE ONTARIO TRANSMISSION COMPANY, LIMITED (hereinafter called the Transmission Company),

of the Fifth Part;

—and—

NIAGARA, LOCKPORT AND ONTARIO POWER COMPANY (hereinafter called the Lockport Company),

of the Sixth Part;

WHEREAS, the Power Company has an issued and outstanding capital stock of Ten Million Dollars ($10,000,000) par, amount represented by One Hundred Thousand shares of the par value of One Hundred Dollars ($100.00) each—

NOW THIS AGREEMENT WITNESSETH that, in consideration of the covenants, agreements and considerations herein contained, the parties respectively covenant and agree the one with the other as follows:—

APPENDIX "C."

FIRST: The Vendor agrees to sell to the Purchaser and the Purchaser agrees to purchase from the Vendor, ninety thousand (90,000) shares of the par value of one hundred dollars ($100.00) each, of the capital stock of the Power Company and the remaining ten thousand (10,000) shares of said stock of the par value of one million dollars ($1,000,000) to the extent that the holders thereof put the Vendor in a position to make delivery of such shares to the Purchaser prior to the time for completion as hereinafter defined.

SECOND: The consideration for the said sale shall be:

(*a*) The sum of eight million dollars ($8,000,000), or such portion of said sum as shall equal eighty per cent. (80%) of the par amount of the shares of said stock of the Power Company transferred and delivered to the Purchaser at the time for completion as hereinafter defined, which sum the Purchaser hereby agrees to pay and satisfy by the issue and delivery to the Vendor of the debentures of the Purchaser guaranteed as hereinafter provided for, bearing date on the date of the said time for completion in such denominations being multiples of one hundred dollars ($100.00) as the Vendor shall require, payable forty years from the said date and bearing interest at the rate of four per cent. (4%) per annum, payable half-yearly, said debentures being payable as to principal and interest in Toronto, Canada; New York, United States of America, and/or London, England, at the option of the holders; the said debentures as to both principal and interest to be payable in gold coin of the present standard of weight and fineness of the country where same shall be paid; and, unless otherwise agreed between the Vendor and the Purchaser, interest coupons to be attached to said debentures and the said debentures and the coupons attached thereto to be in the forms set out in Schedule "A" to this agreement, or to the like effect with any variations or additions which the Vendor may before the time for completion required to secure listing and quotation of same on any exchange or exchanges; said debentures and coupons to be engraved or lithographed, the debentures to be sealed with the seal of the Purchaser and signed by the Chairman and Secretary, and the coupons to be signed by the Secretary; the signature of the coupons to be either written or lithographed or engraved as the Purchaser may determine. Provided that in lieu of delivering at the time for completion said lithographed or engraved debentures the Purchaser may issue and deliver interim debentures with or without coupons, such interim debentures and coupons, if any, to be in such form and in such denominations as the Vendor may be willing to accept and to be guaranteed as to principal and interest in the same manner as is provided for in respect of said lithographed or engraved debentures, and to entitle the holder or holders thereof to said lithographed or engraved debentures as soon as the same are prepared in exchange for an equal amount of said interim debentures, and to give to the holder or holders thereof, or of any coupons attached thereto, pending such exchange, every right which the holder or holders of said lithographed or engraved debentures would have; and if interim debentures are delivered. the said lithographed or engraved debentures shall be prepared and made ready to be exchanged therefor within two months from the time for completion as hereinafter defined, and shall be exchanged for said interim debentures as and when said interim debentures are delivered to the Purchaser after said lithographed or engraved debentures are so prepared and made ready; and

(*b*) The execution and delivery by the Purchaser of an agreement with the Vendor and the Toronto General Trusts Corporation, which, unless otherwise agreed between the Vendor and the Purchaser, shall be in the form set out in Schedule "B" of this agreement, and which the Purchaser agrees with the Vendor to execute and deliver at the time for completion as hereinafter defined.

THIRD: It is understood between the Vendor and the Purchaser, and the Purchaser agrees with the Vendor, that before the time for completion as hereinafter defined, the Vendor may cause or procure the Power Company to do and the Power Company may do all such things as may be requisite or proper to be done *so that at the time for completion as hereinafter defined the respective assets of the Power Company and the Transmission Company will consist only of those described in Schedule "C"* to this agreement. And it is further understood between the Vendor and the Purchaser, and the Vendor agrees with the Purchaser that the Vendor will cause or procure the Power Company and the Transmission Company to do all such things as may be required or

proper to be done so that the respective liabilities (whether direct, indirect, contingent, accruing or accrued) of the said companies at the time for completion as hereinafter defined, shall be only those described in Schedule "D" to this agreement, and in default of so doing or in so far as he shall not so do the Vendor will pay or settle all such liabilities.

The Power Company and the Purchaser severally agree with the Vendor that should the Power Company and/or the Transmission Company before the time for completion have sold or assigned any assets of either Company, such as accounts receivable or other choses in action, and should such assets not have been collected or reduced to possession by the owner or owners thereof, the Power Company and/or the Transmission Company will, from time to time, at the request and expense of the Vendor, use all reasonable means to collect and get in such of said assets or the proceeds thereof as the Vendor may specify, and will account for and pay and deliver over such assets or proceeds, as the case may be, from time to time received by the Power Company and/or the Transmission Company to the Vendor or the person or persons respectively entitled thereto.

The Vendor agrees with the Power Company and the Purchaser that in addition to the assets set out in said Schedule "C" hereto, there shall be left in the hands of the Power Company at the time for completion a sum estimated by the Vendor to be equal to—

(*a*) Interest and Sinking Fund payments on the bonds and debentures of the Power Company and the Transmission Company mentioned in the said Schedule "D" which shall have accrued but shall not be due at the time for completion, and

(*b*) The proper proportion of all rentals and payments to the Commissioners of the Queen Victoria Niagara Falls Park, and of all unpaid rates, taxes and assessments for the year 1917, adjusted to the time for completion, and if such estimate shall, after completion, prove inaccurate, the excess or deficiency when determined shall be paid by the Vendor to the Power Company, or by the Power Company or the Purchaser to the Vendor as the case may require.

The assets of the Power Company at the time for completion are not intended to include any rentals, sums or moneys payable or to become payable for power supplied or otherwise, under any lease or contract which shall have accrued or shall have been earned, but shall not be due or payable at the time for completion, and if they do include any such items the Purchaser shall use every reasonable effort to collect such items, and if and when collected shall pay, or procure to be paid, to the Vendor, the amount thereof adjusted to the time for completion, and the Purchaser shall also at the time for completion pay or procure to be paid to the Vendor the value of all prepaid insurance, rentals, taxes, rates (including local improvement rates), assessments and payments for telephone services adjusted to the time for completion.

FOURTH: The Purchaser shall have thirty days from the date hereof within which to examine the real property titles of the Power Company and of the Transmission Company. The Vendor shall not be obliged to deliver any abstract of title or to incur any expense in connection with the investigation of said titles, but the Purchaser shall search the said titles entirely at its own expense. The Vendor will permit the Purchaser or procure the Purchaser to be permitted to inspect all documents relating to the titles which may be in the possession or power of the Power Company or the Transmission Company. If any objection or requisition in respect of said titles shall be made by the Purchaser which the Vendor may for any reason whatsoever be unwilling to comply with or to remove whether able to do so or not, the Vendor shall

have the right to rescind this agreement by written notice to the Purchaser, of his election to do so, and such right may be exercised notwithstanding any attempt to remove or to comply with or any partial removal or compliance with any such objection or requisition, and notwithstanding any negotiations which may have been had between the parties with reference thereto. If the Purchaser shall not have made any specific requisition or objection to the said titles within the said period of thirty days, or if all specific requisitions or objections made within the said period of thirty days shall have been removed or complied with or waived, the Purchaser shall be deemed to have accepted the titles of the Power Company and of the Transmission Company; provided always that the Purchaser may waive all such objections or requisitions by giving notice in writing to that effect to the Vendor at any time within fifteen days from the receipt of such notice of rescission, and upon such notice of waiver being given this agreement shall remain in full force and effect as though such objections or requisitions had never been made.

FIFTH: Upon the completion of the sale under this agreement, the Vendor agrees that he will tender or cause to be tendered the resignation of all members of the Boards of Directors of the Power Company and of the Transmission Company, and also that he will tender or cause to be tendered the resignation of all officers of said companies respectively, or will terminate, or cause to be terminated, their employment, and that the Boards of Directors of the Power Company and the Transmission Company will at that time respectively assist the Purchaser in acceptance of such resignations and in the election of new directors nominated by the Purchaser.

SIXTH: The Vendor agrees that the Power Company and the Transmission Company will, until the time for completion as hereinafter defined, repair and keep in repair and in good working order and condition, reasonable wear and tear only excepted, all the present buildings, erections, plant, machinery and fixtures of said companies and all additions thereto, and will, pending said time for completion and, except as otherwise expressly provided for herein, carry on the respective businesses of said companies in the usual and ordinary manner, but in case any loss or damage which would involve an expenditure of more than two hundred and fifty thousand dollars ($250,000) shall occur, the Vendor may, by notice in writing addressed to the Purchaser, rescind this agreement, unless the Purchaser shall, by notice in writing, waive the above covenants to repair, rebuild or make good, and agree to accept, in lieu thereof, an assignment of the rights of the Vendor, the Power Company and the Transmission Company, or of any one or more of them (if any), to such insurance moneys as may be payable in respect thereof; provided that the Vendor shall not, nor shall the Power Company or the Transmission Company proceed with any such repairs, rebuilding or making good until one week after it shall have submitted the plans thereof to the Purchaser and shall have considered any representations or suggestions which the Purchaser may make in respect thereof. In case there shall be an obligation to repair, rebuild and make good under the foregoing provisions, and the Vendor shall not have rescinded this agreement under the provisions of this clause, the completion of this agreement shall not be thereby delayed, but the assets of the Power Company will be restored by the inclusion therein of a sum estimated in good faith by the Vendor to be equal to the reasonable cost of such repair, rebuilding, or making good, or so much thereof as shall not have been finished or paid for at the time for completion, and should said sum prove to be less than such reasonable cost the difference when determined shall be paid by the Vendor to the Power Company. Neither the Vendor, the Power Company nor the Transmission Company shall be obliged to make any betterments or improvements to the property of either company, but if any such improvements shall be deemed expedient by either company, the Vendor shall cause the Purchaser to be notified in case the expenditure in respect of any one item shall exceed five hundred dollars ($500.00) and the Purchaser shall pay the Vendor in cash at the

time for completion as hereinafter defined, a portion of all expenditures made by either company for the betterment or improvement of the property of either company from the date hereof up to said time for completion in respect of—

(*a*) Items not exceeding five hundred dollars ($500.00) and

(*b*) All items exceeding five hundred dollars ($500.00) in respect of which the Purchaser shall have consented to the expenditure in writing, which portion shall bear the same proportion to the total amount of such expenditure as the amount of stock of the Power Company delivered to the Purchaser in completing this agreement bears to the total issued capital stock of the Power Company.

The Vendor agrees with the Purchaser that until the time for completion, as hereinafter defined, neither the Power Company nor the Transmission Company will surrender any of the franchise rights or privileges granted to them, or either of them, or do, omit or permit to be done or omitted, any act or thing whereby any such particular rights or privileges may become forfeited or terminated, or liable to forfeiture or termination.

SEVENTH: The Guarantor agrees with the Vendor and the Purchaser and each of them to guarantee and hereby guarantees to the respective holders thereof for the time being the due payment by the Purchaser of the interest and principal of all debentures of the Purchaser to be delivered under the terms of this agreement, and the Guarantor further agrees that a guarantee duly executed by the Guarantor and guaranteeing to the Holder thereof for the time being payment of the interest and principal thereof by the Purchaser, shall be endorsed upon each of said debentures of the Purchaser so to be delivered prior to the delivery thereof hereunder, such guarantee, unless altered by consent, to be in the form set out in Schedule "A" to this agreement or to the like effect; and the Guarantor further agrees with the Vendor and the Purchaser, and each of them, to guarantee and hereby guarantees to the Vendor and to the Toronto General Trusts Corporation and its successors and assigns the due performance and observance by the Purchaser of the agreement between the Purchaser and the Vendor and the Toronto General Trusts Corporation to be executed by the Purchaser under the provisions of clause (*b*) of the second section of this agreement.

EIGHTH: The Lockport Company, the Power Company and the Purchaser mutually agree:—

(*a*) That on the first day of April, 1950, if all the now outstanding bonds of the Lockport Company shall have been paid and retired on or before that date, and otherwise as soon after the first day of April, 1950, as all of the said bonds of the Lockport Company shall have been paid and retired, and in any event not later than the first day of November, 1954, the existing contract between the Power Company and the Lockport Company, evidenced by four agreements made between the Lockport Company and the Power Company, and dated, respectively, the 16th day of July, 1904; the 30th day of December, 1904; the 31st day of October, 1905, and the 30th day of December, 1913, (hereinafter called the existing power supply contract) and any extension or renewal of or right of either party thereto to extend or renew the same shall cease and determine; and

(*b*) That in case the Power Company shall at any time or times be prevented by any competent authority other than the Legislature or Government of the Province of Ontario, or by strike, lock-out, riot, fire, invasion, explosion, act of God or the King's enemies, or any other cause, reasonably beyond its control, from delivering to the Lockport Company the power deliverable under the existing power supply contract, or any extension or renewal thereof, or any part of such power, or in case the Lockport Company shall at any time be so prevented from taking such power or any part thereof,

then the Power Company shall not be bound to deliver such power during such time or times or be liable for any penalties or damages or deductions for non-delivery during such time or times, and the Lockport Company shall not be bound to pay for such power during such time or times, but as soon as the cause of such interruption is removed, the Power Company shall, without any delay, deliver the said power as aforesaid, and the Lockport Company shall take the same, and each of the said parties (the Power Company and the Lockport Company) shall, so far as such party can do so, and as early as possible, remove and overcome such cause or causes of interruption.

The Lockport Company covenants with the Power Company and the Purchaser, and each of them, that all the said bonds of the Lockport Company will be paid and retired before or on the first day of November, 1954.

The Power Company agrees with the Lockport Company and the Purchaser agrees with and guarantees to the Lockport Company, and agrees with and guarantees to the Vendor that the Power Company will duly abide by, observe and perform the existing power supply contract between the Power Company and the Lockport Company (as varied by this agreement) and all extensions or renewals thereof; and the Purchaser and the Guarantor undertake and agree with the Power Company, the Lockport Company, the Transmission Company and the Vendor, to use their best endeavours from time to time with the Government and Parliament of Canada and with the Legislature of Ontario to place and keep the Power Company and the Transmission Company at all times in such a position that they and each of them may lawfully carry out the terms of the existing power supply contract between the Power Company and the Lockport Company (as varied by this agreement) and any extensions or renewals thereof so far as relates to the export of the power required for the purpose of such contract, as so varied, and any extensions or renewals thereof.

The Purchaser, the Power Company and the Lockport Company mutually agree that except as by this paragraph (eighth) varied, the existing power supply contract shall continue and remain in full force and effect.

NINTH: This agreement shall not take effect or be binding upon the parties hereto unless and until it shall have been executed and delivered by all the said parties.

TENTH: The Vendor agrees with the Purchaser that neither the Power Company nor the Transmission Company will, before the time for completion as hereinafter defined, create or issue any further shares or their capital stocks, respectively, or any bonds, debentures or like securities.

ELEVENTH: The Vendor agrees with the Purchaser that the Vendor will, from time to time, after the completion of this Agreement, upon the request and at the expense of the Purchaser, furnish to the Purchaser any and all information in connection with any and all of the affairs of the Power Company and the Transmission Company which the vendor may have in his possession or under his control.

TWELFTH: The time for completion of this agreement shall be the first day of the calendar month which shall fall next after sixty (60) days from the execution and delivery of this agreement by all the parties thereto, and if such execution and delivery shall not have taken place by the first day of June, 1917, this agreement shall be void; provided that the Vendor and Purchaser may agree in writing to an extension or extensions of the said date, and of the said time for completion, or either of them, and every such agreement shall be binding on all parties hereto, and if and as often as the time for completion shall be extended the time to which it is extended shall thereafter be taken to be the time for completion for the purposes of this agreement.

THIRTEENTH: The completion of this agreement shall take place at the office of the Purchaser at Toronto, Ontario.

FOURTEENTH: The Power Company and the Transmission Company assent, and each of them assents, to this agreement, and the Power Company and the Transmission Company agree, and each of them agrees, with the Vendor that they and each of them will, at the expense of the Vendor, facilitate in all reasonable ways the due carrying out of all the terms of this agreement to be carried out by the Vendor, and that they and each of them on its part will do and cause to be done all such acts and things as the Vendor hereby agrees to cause or procure to be done by the Power Company and the Transmission Company or either of them.

FIFTEENTH: Time shall be of the essence of this agreement.

SIXTEENTH: The obligations of the Guarantor hereunder shall extend to his successors; and the obligations of every other party hereunder shall bind the successors and assigns of such party if a corporation and the executors, administrators and assigns of such party if a person; and all rights of and benefits to any party hereunder shall extend and enure to the successors and assigns of such party if a corporation, and to the executors, administrators and assigns of such party if a person.

In witness whereof these presents have been duly executed by the parties hereto the day and year first above written.

Witness:
(Signed) W. K. KOESTER.

(Signed) JOHN JOSEPH ALBRIGHT.

The Hydro-Electric Power Commission of Ontario.

(Signed) A. BECK, *Chairman.*
(Signed) W. W. POPE, *Secretary.*

(Signed) J. W. JENKINS.

(Signed) W. H. HEARST, *Prime Minister.*

The Ontario Power Company of Niagara Falls.

By
JOHN JOS. ALBRIGHT, *President.*
ROBERT C. BOARD, *Secretary.*

The Ontario Transmission Company of Niagara Falls.

By
JOHN JOS. ALBRIGHT, *President.*
ROBERT C. BOARD, *Secretary.*

Niagara, Lockport and Ontario Power Company.

By
FRED D. COREY, *President.*
HARRY E. NICHOLS, *Secretary.*

SCHEDULE "A" REFERRED TO IN THE ANNEXED AGREEMENT.

FORM OF DEBENTURE.

$.....

No.....

£.....

The Hydro-Electric Power Commission of Ontario (hereinafter called "the Commission") for value received, hereby promises to pay to the bearer, or, if registered, to the registered holder hereof, on the ..... day of ..... 19 , on presentation and surrender of this debenture, the sum of ..... dollars, at ..... in Toronto, Canada, or at ..... in New York, United States of America, or the sum of ..... pounds sterling, at ..... in London, England, at the holder's option, with interest thereon, until paid, at the rate of four per centum per annum, payable half-yearly, at any of said places, at the holder's option, on the first day of ..... and the first day of ..... in each year, on presentation and surrender of the interest coupons hereto annexed as they severally become due; each payment of principal and interest to be made in gold coin of the present standard of weight and fineness of the country where same shall be made.

This debenture shall pass by delivery, but may be registered as to principal in the name of the holder in a register which shall be kept by the Commission at its office in Toronto, Canada, in which case it can only be transferred by an instrument in writing, signed by the registered holder or his lawful attorney, and registered in the said register. A transfer to bearer may subsequently be registered, after which this debenture shall be transferable by delivery alone until again registered in the name of the holder. Notwithstanding registration, the interest coupons shall continue payable to bearer.

This debenture is issued under the authority of an Act of the Legislative Assembly of the Province of Ontario, entitled ..... and being Chapter ..... of the Statutes of Ontario (1917) passed in the seventh year of the reign of His Majesty King George V.

In witness whereof the Commission has caused its corporate seal to be hereunder affixed and this debenture to be signed by ..... and ..... this ...,..... day of ....., 19 .

.....

(Seal)

.....

FORM OF INTEREST COUPON.

Debenture No. .....

Interest Coupon No. .....

The Hydro-Electric Power Commission of Ontario will pay to the bearer on the ..... day of ..... dollars at ..... in Toronto, Canada, or at ..... in New York, United States of America, or ..... pounds sterling, at ..... in London, England, at the bearer's option; such payment to be made in gold coin of the present standard of weight and fineness of the country where same shall be made, and being the half-year's interest on debentures No. ..... payable on the ..... day of .....19 .

Dated the ..... day of ..... 19 .

FORM OF GUARANTEE FOR ENDORSEMENT ON DEBENTURES.

By virtue of powers conferred by the Legislature of the Province of Ontario, Canada, the Province of Ontario hereby guarantees to the holder of the within bond for the time being and to the holder for the time being of any of the coupons attached thereto, due payment of the principal of the within debenture and of the interest thereon, according to the tenor of the said debenture and of the coupons attached thereto.

SCHEDULE "B" REFERRED TO IN THE ANNEXED AGREEMENT.

This Agreement made this ..... day of ....., A.D. 1917:

BETWEEN:

THE HYDRO-ELECTRIC POWER COMMISSION OF ONTARIO, (hereinafter called "the Commission"),

of the First Part;

—and—

JOHN JOSEPH ALBRIGHT, of Buffalo, in the United States of America, hereinafter called "the Vendor"),

of the Second Part;

—and—

THE TORONTO GENERAL TRUSTS CORPORATION, representing and acting herein for the benefit of the various holders for the time being of the various bonds and debentures hereinafter mentioned, (hereinafter called "the Trustees"),

of the Third Part;

WITNESSETH THAT—

FIRST: For divers valuable considerations and in consideration of one dollar ($1.00) of lawful money of Canada, paid by the Vendor and the Trustees to the Commission, receipt of all which considerations the Commission hereby acknowledge, the Commission hereby covenants with the Vendor and the Trustees and each of them—

(1) That the Ontario Power Company of Niagara Falls (hereinafter called the Power Company) will duly pay, as the same become due, the outstanding first mortgage five per cent., forty-year sinking fund gold bonds of the Power Company, amounting on the 31st December, 1916, to the sum of nine million nine hundred and eighty-four thousand dollars ($9,984,000) and all interest thereon and sinking fund payments connected therewith secured by mortgage dated the 2nd of February, 1903, between the Power Company and the Trustees, and Supplementary Agreement dated the 1st October, 1908, between the Power Company and Francis Ralston Welsh, and others, and will perform, abide by and observe all the covenants, agreements, provisoes and obligations on the part of the Power Company in the said bonds, and/or in the said mortgage and supplementary agreement contained; and

(2) That the Power Company will duly pay as the same become due the outstanding 6 per cent. gold coupon debentures of the Power Company, payable as to principal on the 1st day of July, 1921, amounting on the 31st December, 1916, to two million eight hundred and eighty thousand dollars ($2,880,000) and all interest thereon

and sinking fund payments connected therewith, secured by indenture dated 30th June, 1906, made between the Power Company and the Trustees, and by a second mortgage, dated 2nd November, 1914, between the Power Company and National Trust Company, Limited, and will perform, abide by and observe all the covenants, agreements, provisoes and obligations on the part of the Power Company in the said debentures, and/or in the said indenture and/or mortgage contained; and

(3) That the Power Company and/or the Ontario Transmission Company, Limited (hereinafter called the Transmission Company), will duly pay as the same become due the outstanding 5 per cent. first mortgage gold bonds of the Transmission Company, payable as to principal on the first day of May, 1945, amounting on the said 31st December, 1916, to one million eight hundred and five thousand dollars ($1,805,000) and all interest thereon and sinking fund payments connected therewith secured by a first mortgage, dated 16th August, 1905, between the Transmission Company and the Trustees, and two certain agreements, the one dated 20th April, 1910, between the Power Company, the Transmission Company, the Trustees and the Holders from time to time of the 5 per cent. first mortgage gold bonds of the Transmission Company, and the other dated 11th June, 1910, between the Transmission Company, the Standard Trust Company of New York, the Power Company and the Holders from time to time of the said 5 per cent. first mortgage gold bonds of the Transmission Company, and will perform, abide by and observe all the covenants, agreements, provisoes and obligations on the part of the Transmission Company, and/or the Power Company in the said bonds of the Transmission Company and/or in the said mortgage, and/or in the said agreements dated respectively 20th April, 1910, and 11th June, 1910, contained.

SECOND: This agreement shall bind the Commission, its successors and assigns and enure to the benefit of the executors, administrators and assigns of the Vendor and the successors and assigns of the Trustees.

In witness whereof, these presents have been duly executed by the parties hereto the day and year first above written.

Witness:

W. K. KOESTER.

THE HYDRO-ELECTRIC POWER COMMISSION OF ONTARIO.

BY .....
Chairman.

.....
Secretary.

(Sgd.) JOHN JOSEPH ALBRIGHT.

THE TORONTO GENERAL TRUSTS CORPORATION.

BY .....

SCHEDULE "C" REFERRED TO IN THE ANNEXED AGREEMENT.

ASSETS OF THE POWER COMPANY AND/OR THE TRANSMISSION COMPANY.

(*a*) All freehold and leasehold lands, tenements and hereditaments of the Power Company and/or the Transmission Company, including the house in the City of Niagara Falls, Ontario, standing in the name of R. C. Board.

(*b*) All contracts between the Power Company and/or the Transmission Company and the Commissioners of the Queen Victoria Niagara Falls Park, and all rights and privileges thereunder.

(*c*) All franchises, easements, water powers, water privileges and water rights of the Power Company and/or the Transmission Company.

(*d*) All works, buildings, fixtures, plant, machinery, equipment and apparatus of every kind of the Power Company and/or the Transmission Company.

(*e*) All documents, including plans, records, contracts, and specifications of the Power Company and/or the Transmission Company.

(*f*) All furniture, chattels, stock-in-trade, stores, licenses, patent rights, prepaid insurance and books of account and other books of the Power Company and/or the Transmission Company, including items described as "work orders" and "working assets."

(*g*) All interest of the Power Company and/or the Transmission Company in all contracts and engagements mentioned or described under letters (*e*), (*f*), (*g*), (*h*) and (*l*) in schedule "D" to the annexed agreement.

(*h*) All the shares in the capital stock of the Transmission Company, said shares being owned by the Power Company.

SCHEDULE "D" REFERRED TO IN THE ANNEXED AGREEMENT.

LIABILITIES OF THE POWER COMPANY AND/OR THE TRANSMISSION COMPANY.

(*a*) First mortgage five per cent. bonds of the Power Company, and interest thereon, and sinking fund payments connected therewith; said bonds amounting on the 31st December, 1916, to the sum of nine million nine hundred and eighty-four thousand dollars ($9,984,000), and all covenants, agreements, obligations and liabilities of the Power Company, in or under the mortgage dated 2nd February, 1903, between the Power Company and the Toronto General Trusts Corporation and/or the supplemental agreements dated 1st October, 1908, between the Power Company and Francis Ralston Welsh and others, securing said bonds.

(*b*) Six per cent. (6%) gold coupon debentures of the Power Company and interest thereon and sinking fund payments connected therewith, said debentures amounting on the 31st December, 1916, to the sum of two million eight hundred and eighty thousand dollars ($2,880,000), and all covenants, agreements, obligations and liabilities of the Power Company, in or under the indenture dated 30th June, 1906, made between the Power Company and the Toronto General Trusts Corporation and/or the second mortgage, dated 2nd November, 1914, made between the Power Company and National Trust Company, Limited, securing said debentures.

(*c*) All obligations and liabilities of the Power Company as guarantors or otherwise in respect of the first mortgage gold bonds of the Transmission Company, including

all such obligations and liabilities under any covenant, agreement or guarantee relating to said bonds.

(*d*) First mortgage five per cent. gold bonds of the Transmission Company, and interest thereon, and sinking fund payments connected therewith, said bonds amounting on the 31st December, 1916, to one million eight hundred and five thousand dollars ($1,805,000), and all covenants, agreements, obligations and liabilities of the Transmission Company, in or under the mortgage dated August 16th, 1905, made between the Transmission Company and the Toronto General Trusts Corporation, and/or two certain agreements, the one dated 20th April, 1910, made between the Power Company, the Transmission Company, the Toronto General Trusts Corporation, and the Holders from time to time of the five per cent. first mortgage gold bonds of the Transmission Company, and the other dated 11th June, 1910, made between the Transmission Company, the Standard Trust Company of New York, the Power Company and the Holders from time to time of the said first mortgage gold bonds of the Transmission Company.

(*e*) All obligations and liabilities of the Power Company and/or the Transmission Company under any and all contracts or agreements between the Power Company and/or the Transmission Company and the Commissioners of the Queen Victoria Niagara Falls Park.

(*f*) All obligations and liabilities of the Power Company and/or the Transmission Company under all power supply contracts (whether made originally by the Power Company and/or the Transmission Company or otherwise), with the following parties:—

Niagara, Lockport and Ontario Power Company,
Canadian Steel Foundries, Limited,
Canada Cement Company, Limited,
Canadian Ramapo Iron Works,
Electro-Metals, Limited,
Department of Railways and Canals,
Coniagas Reduction Company,
American Cyanamid Company,
Town of Merritton,
Hydro-Electric Power Commission,
The Norton Company,
Dain Manufacturing Company, Limited,
Cronmiller & White Brewing Company,
C. Reichman & Son,
James Battle,
Page, Hersey Iron Tube and Lead Company, Limited.
The Robinson Bros. Cork Co., Limited.
Ontario Paper Company, Limited,
Charles T. Grantham (Empire Cotton Mills),
Metals-Chemical, Limited,
A. E. Augustine,
Beaver Wood Fibre Company, Limited,
Corporation of Port Colborne,
Humberstone Village,
Humberstone Summer Resort,
H. J. Shore,
Ideal Baking Company.
Humberstone Shoe Company,
P. Noxel,
Woods & Son,
R. A. Wilson,
E. Reeb.

(*g*) All obligations and liabilities of the Power Company and/or the Transmission Company, under three contracts for the purchase of power from the Toronto Power Company of Ontario, Limited, dated respectively, September 5th, 1914; October 13th, 1915, and March 17th, 1916.

(*h*) All written contracts and engagements which the Power Company and/or the Transmission Company may make or enter into in the ordinary course of business prior to the time for completion.

(*i*) All leases and contracts for crossings, rights of way and pole, wire, cable and transmission rights and privileges which the Power Company and/or the Transmission Company shall hold, possess or be liable for at the time for completion, and all liabilities and obligations in respect of rentals or otherwise thereunder.

(*j*) All assessments, rates and taxes, including local improvement rates.

(*k*) Obligation of Power Company for commissions on all power sold to Ontario Paper Company, Limited, and Beaver Wood Fibre Company, Limited.

(*l*) All obligations and liabilities of the Power Company and/or the Transmission Company on contracts for telephone service.

(*m*) Any obligation or liability of the Power Company or of R. C. Board in connection with the mortgage on the house mentioned under letter (*a*) in Schedule "C" to the annexed agreement.

REAL ESTATE

The construction of Chippawa Power Development and other undertakings has rendered it necessary to purchase real estate where affected by the right-of-way. Reports have been prepared on the ownership of real estate and riparian rights at Ranney's Falls and other points. Applications for crown grants and leases have been applied for, covering land at Round Lake and South River.

Real estate affected by right-of-way has been purchased in the following cases:

Purchases

The real estate purchases consist of:—

1. Lands required for the Chippawa to Queenston Power Canal and the construction railway which parallels it and which will, after its construction, be used as an industrial spur.

2. Right-of-way for the duplication of the high tension transmission line from Dundas to Toronto.

3. The Central Ontario system which was purchased from the Electric Power Company and transferred to the Ontario Government by act of parliament.

4. The property of the Ontario Power Company which is located principally in the City of Niagara Falls and the Township of Stamford.

5. Conduit for new power cable at Falls View.

6. University street office site extension.

7. York sub-station site.

8. Extension of Niagara Falls distributing station site.

9. Erindale Power Company at Erindale.

The above-mentioned purchases necessitated the following work:—

(*a*) The filing of deeds and other title papers.

(*b*) Checking descriptions and plans for deeds.

(*c*) Reports on ownership of land at Dams 2 and 5, Trent River, north of the Town of Trenton.

(*d*) Report on ownership of the Waterworks land, Trenton.

(*e*) Report on the Cartwright property, Napanee.

(*f*) Report on ownership, South River Development.

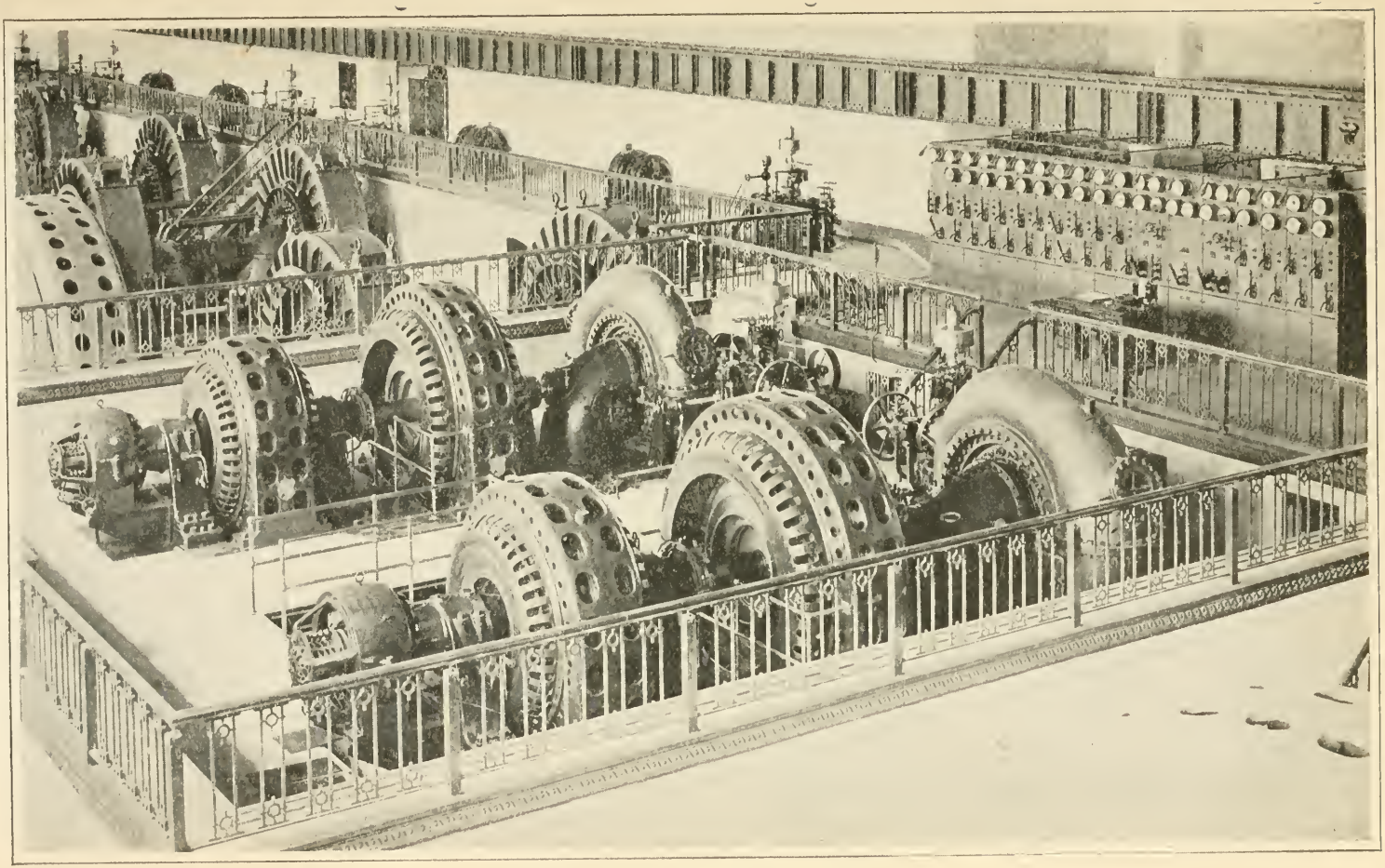
(*g*) Inspection of the Commission's property and boundaries of same.

(*h*) Inspection of new land surveys.

(*i*) Surveys of land, preparation of descriptions and plans in certain cases.

(*j*) Preparation of report for the Tax Commissioner on the Commission's properties.

Plans showing the real estate owned by the Commission in Stamford Township and Niagara Falls are being prepared, and a survey made of conditions governing this land as defined by the title papers.



Exciter Bay, Ontario Power Company

Crossing Designs

During the year several important railway structures were designed for the Niagara Development works, where seven distinct crossings of different railway lines are made by canal and construction railway. Among these were the Niagara, St. Catharines and Toronto Railway arch with span of 86 feet, designed to carry Cooper's E-60 loading, and the G.T.R. (Wabash) arch, with a span of 100 feet, designed for similar loading. Both of these structures are of reinforced concrete and are unique in being the largest of their kind in Canada. A great many negotiations were necessary with the various railways interested, in order to effect temporary diversions of their tracks while permanent structures were being built, and to maintain the uninterrupted operation of their lines.

The permanent structure under the Niagara, St. Catharines and Toronto Railway is now well under construction. Negotiations have also been carried on with the Dominion Department of Public Works, Department of Railways and Canals, and the Queen Victoria Niagara Falls Park Commission, with a view of meeting their requirements in connection with changes to mouth and channel of Chippawa Creek.

Studies have also been made in connection with the replacement of Chippawa Highway swing bridge, and a number of other highway structures, that will be necessary to provide for crossings of the Development Canal.

A number of railway standards in design were prepared and utilized on the construction railway of the Niagara Development work.

SECTION II

TRANSMISSION SYSTEMS

STEEL TOWER TRANSMISSION LINES

DUNDAS—TORONTO

Surveys

During the earlier part of the year a survey party was engaged in taking levels for a profile of the line. This work was completed in December, 1916, and after the profile plans had been finished, the same party commenced staking out towers in the field.

Contracts for Material

Contracts for material were let to the following companies:

To the Canadian Bridge Company of Walkerville, the supply of galvanized steel towers and footings.

To the Canadian Porcelain Company of Hamilton, and the Ohio Brass Company of Akron, Ohio, the supply of insulators.

To the Hadley Company of Chatham, the supply of fence posts and lumber for bridges and culverts.

To the Frost Wire Fence Company of Hamilton, the supply of fence wire and gates.

The remainder of the material, with the exception of copper cable, was supplied from the Commission's stores.

On account of market conditions, it was decided to delay the purchase of power cable until conditions became more favourable.

Organization

The field organization for the year 1917 was similar to that used in 1915 on the Niagara-Dundas line and consisted of tower footing, tower assembly and erection, right-of-way clearing, fence, bridge and insulator erection gangs.

Progress of Construction

The total length of this line is about 35 miles.

Work was commenced on January 5, 1917, and completed on October 29th with the exception of the stringing of power cable, which has not been purchased.

Tower Design and Spacings

Designs used in connection with the new Niagara-Dundas line were followed fairly closely in arranging details and spacings for the Dundas-Toronto section.

Re-stringing of Dundas-Toronto and Kitchener-Stratford Lines

This work was undertaken during the year. The Dundas-Toronto section was originally two circuits of 3/0 aluminum, which have been replaced by two circuits

of 336,000 circ. mil. aluminum, with steel reinforcement, thus adding materially to the carrying capacity and permanence of the section.

This revision has been carried to points near the west bank of the Humber River; east of that point, the only changes to date are the provision of an additional entrance to Toronto Station and the re-location of some towers in the laboratory and storehouse on the Commission's property.

The Kitchener-Stratford section was changed from one circuit of 3/0 aluminum to 7/16" diameter steel, as it is used as a tie line only.

LOW TENSION TRANSMISSION LINES

On October 31, 1917, there were completed and under construction 1,584 miles of low tension transmission lines, of voltages varying from 46,000 to 2,200 volts.

The mileage of these lines is distributed among the various systems as follows:

Niagara System	983.54
St. Lawrence System	66.35
Severn System	117.69
Wasdell's System	65.85
Eugenia System	259 66
Muskoka System	26.32
Central Ontario System	64.94

In the construction of these lines 9,780 miles of wire weighing 6,492,675 pounds and 63,821 wood poles were used.

On the transmission line poles 1,321 miles of single-circuit telephone line has been erected for use in operating the system. During the year an average of 10 gangs were employed, two of which, under the direction of a forestry expert, were employed in trimming trees. These gangs constructed 263 miles of transmission line as well as distribution system in eighteen towns and villages, and rural lines in four townships.

For the above lines 108 crossing plans were prepared and submitted to telephone and railway companies for approval.

Local distribution systems were constructed by the Commission in the towns and villages of: Horning's Mills, Elmwood, Bothwell, Long Branch, Lambton, Islington, Napanee, Midland (extension), Hanover, Chesley, Victoria Harbour, Arthur, Orangeville, Grand Valley, Shelburne, Tara, Dublin and rural lines in the townships of Toronto, Etobicoke, Vaughan and Scarboro.

Although handicapped by scarcity of labor and the difficulty of obtaining material some important lines were successfully constructed in good time to the great satisfaction of the communities benefited thereby.

Description

NIAGARA

Sec. No.	From	To	Length of Pole	Span	Miles	No. of Poles
L.T.			feet	feet		
1	Dundas Sub. H.E.P.C....	Junction Pole No. 134....	40	120	2.84	134
2	Junction Pole No. 134....	Beach Pump House.....	40	120	6.34	323
3	" " No. 134....	Asylum	50	120	1.13	67
4	Berlin Sub. H.E.P.C....	Junction Pole No. 10	40	.....	.18	10
5	Junction Pole No. 10.....	Waterloo	40	120	1.64	78
6	" " No. 10.....	Berlin Corp. Station.....	45	120	.76	35
7	Berlin Sub. H.E.P.C.....	New Hamburg.....	40	120	12.27	556
8	Woodstock "	Ingersoll	40	120	9.90	455
9	" "	Junction Pole No. 508....	40	120	11.12	508
10	Junction Pole No. 508....	Tillsonburg.....	40	120	10.30	467
11	" " No. 508....	Norwich.....	40	120	4.59	207
12	St. Thomas Sub. H.E.P.C.	St. Thomas Corp. Station	40& 45	120	1.13	50
13	Stratford " "	Stratford "	40& 45	120	1.75	78
14	Preston " "	Junction Pole No. 99.....	45	120	2.04	99
15	Junction Pole No. 99....	Hespeler.....	40	120	2.08	99
16	" " No. 99....	Galt.....	40	120	3.75	173
17	Preston Sub. H.E.P.C....	Preston Corp. Station....	35	120	.14	11
			These poles also carry Section L.T. 35			
18	London Sub.....	Junction Pole No. 38.....	40	120	.79	38
19	Junction Pole No. 38.....	Asylum, London	45	120	1.54	70
20	" " No. 38.....	Junction Pole No. 93.....	40	120	1.22	55
21	London Sub. H.E.P.C....	London Sub. No. 1.....	40	120	3.56	178
22	Junction Pole No. 93.....	" " No. 1.....	40	120	1.71	96
23	" " No. 93.....	" " No. 2.....	40	120	.31	20
24	London Sub. No. 1.....	Springbank.....	40	120	3.55	156
25	Dundas Sub. H.E.P.C....	Dundas Town.....	40& 45	120	.98	58
26	Cooksville Sub. H.E.P.C.	Port Credit L.S. Road ...	40	120	2.74	129
26a	Pt. Credit L.S. Road....	Port Credit Brick Works	45	120	.24	14
27	Cooksville Sub. H.E.P.C.	Brampton	40	120	11.24	510
			These poles also carry Section L.T. 34 Circuits			
28	Junction Pole No. 1547...	Clinton.....	40	120	1.27	78
29	" " No. 1152...	Seaforth.....	40	120	1.50	74
30	" " No. 648....	Mitchell.....	40	120	1.27	63
31	Guelph Sub. H.E.P.C.....	O. A. College.....	40	120	1.56	77
32	" H.E.P.C. Sub. Property.....	.....	40	120	.09	8
					18 poles on Station	
34	Cooksville Sub. H.E.P.C..	Weston.....	40	120	14.07	551
			These Circuits carried on			
35	Preston Sub. H.E.P.C....	G. P. & H. Ry.....	40	120	.12	6
			These Circuits carried on			
36	Junction Pole No. 84, Port Credit.....	Mimico (New Toronto).	45	120	5.75	266
38	Dundas Sub. H.E.P.C....	Dom. Sewer Pipe Works.	40	120	7.35	350
39	Hamilton Asylum P.H...	Hamilton Asylum.....	35	120	.63	30
40	Junction Pole No. 260....	Waterdown	35	120	1.50	72
40a	Dom. Sewer Pipe Works.	Junction Pole No. 260....	.....	.....	1.92	.....
41	St. Thomas Sub. H.E.P.C.	Port Stanley.....	35	120	12.27	573
42	Junction Pole, No. 290, LT. 8	Standard White Lime Co.	.....	.....	1.00	2
			These circuits carried on Section			
43	Dundas Sub. H.E.P.C....	Jno. Bertram & Son.....	40	120	1.21	10
			These Circuits carried on Section			
44	Baden Sub.....	Wellesley	30	150	7.92	316
45	Junct. Pole No. 240 L.T. 8	Beachville	40	120	.09	3
46	St. Mary's Sub.....	St. Mary's Cement Works	40	120	2.22	80

of Lines.

SYSTEM.

Voltage	No. of Circuits	Power Cables B. & S. Gauge	Telephone Wires, B.&S & B.W.G. Gauge	Ground Wire	Work Commenced	Work Completed	In Operation
13,200	2	No. 1/0 Alum	10 Copper	¼" Gal. Steel	July 13, 1910	Jan. 2, 1911	
"	2	1/0 "	10 "	¼" "	July 13, "	Jan. 2, "	
"	1	2 "	10 "	¼" "	Dec. 5, "	Feb. 8, "	
"	2	1/0 "	10 "	¼" "	Aug. 25, "	Sept.11, 1910	
"	2	1/0 "	10 "	¼" "	Sept.11, "	Nov. 25, "	
"	2	1/0 "	10 "	¼" "	Aug. 25, "	Sept.11, "	
"	2	2 "	10 "	¼" "	Sept. 11, "	Jan. 2, 1911	Feb. 3, 1911
"	2	1/0 "	10 "	¼" "	Nov. 14, "	Mar. 28, "	
"	2	1/0 "	10 "	¼" "	Jan. 2, 1911	Apr. 29, "	
"	2	1/0 "	10 "	¼" "	Jan. 2, "	Apr. 29, "	
"	1	2 "	10 "	¼" "	Feb. 13, "	Mar. 30 "	
"	2	1/0 "	10 "	¼" "	Dec. 14, 1910	Dec. 30, 1910	
"	1	2 Copper	10 "	¼" "	Built by Corporation		
6,600	3	1-2Alum 2-4/0 "	10 "	¼" "	Oct. 8, 1910	Jan. 19, 1911	
"	1	2 Alum	10 "	¼" "	Oct. 8, "	Dec. 30, 1910	
"	2	4/0 "	10 "	¼" "	Oct. 8, "	Jan. 19, 1911	
"	1	2 Copper	10 "	¼" "	Built by Corporation.		
circuits to G. P. H. Railway Sub.							
13,200	2	1-3/0 Alum 1-2 "	10 Copper	¼" "	Oct. 26, 1910	Jan. 10, 1911	
"	1	2 "	10 "	¼" "	Oct. 26, "	Jan. 19. "	
"	1	3/0 "	10 "	¼" "	Oct. 24, "	Jan. 21, "	
"	1	3/0 "	10 "	¼" "	Oct. 20, "	Jan. 20, "	
"	2	1-3/0 " 1-1/0 "	10 "	¼" "	Dec. 23, "	Jan. 20, "	
"	1	1/0 "	10 "	¼" "	Dec. 23, "	Jan. 20, "	
"	1	1/0 "	10 "	¼" "	Jan. 1, 1911	Jan, 7, "	
2,200	1	400,000c.m. Alum 250,000c.m. Copper	.....		Dec. 1, 1910	Jan. 1, "	
13,200	2	2 Alum	10 Copper	¼" Gal. Steel	Feb. 24, 1911	July 10, "	
"	2	2 "	10 "	¼" "	Apr. 5, "	July 23 "	
"	2	2 "	10 "	¼" "	Feb. 15, "	May 6, "	
from poles No. 1 to 89—1.94 miles							
26,400	2	3/0 Alum	10 Copper	¼" "	Apr. 6, "	Aug. 4, "	
"	2	2 Alum	10 "	¼" "	Mar. 25, "	Sept.13, "	
"	2	2 "	10 "	¼" "	Mar. 24, "	Aug. 3, "	
13,200	1	1/0 "	10 "	¼" "	July 21, "	Nov. 9, "	
550d.c.	1	Municipal lines					
2,200a.c.	4						
13,200a.c.	3	1/0 Alum	10 Copper	¼" "	Aug. 7, 1911	Sept. 3, 1911	Sept. 4, 1911
Property in all.							
13,200	2	2 Alum	8 Copper	¼" "	Apr. 19, "	July 24, "	
Section L.T. 27 poles, 1 to 89, inclusive							
6,600	1	1/0 Alum	10 Copper	¼" "	Mar. 13, "	Mar. 21, "	
Section L.T, 17 poles, 1 to 11, inclusive							
13,200	2	1-2 S.R.Alum 1-2 Alum	8 Copper	¼" "	Apr. 26, "	Feb. 29, 1912	
"	1	2 "	8 "	¼" "	July 21, "	Dec. 19, 1911	Apr. 6,1912
2,200	2	4 Copper	10 "	.....	Sept. 6, "	Oct, 27, "	Apr. 6 "
13,200	1	2 Alum	8 "	¼" Gal. Steel	Sept. 30, "	Oct. 10, "	Apr. 6 "
"	1	2 "	8 "	¼" "	Sept. 30, "	Oct. 7, "	Mar. 1 "
"	1	2 "	8 "	¼" "	Oct. 16, "	Mar. 8, 1912	Mar. 9 "
2,200	1	2 "	.....	.....	.....	.....	.....
L.T. 8 poles, from Beachville pole 290 to pole 240.							
13,200	1	2 Alum	10 Copper	¼" Gal. Steel	Dec. 1, 1911	Dec. 19, 1911	Dec. 21,1911
L.T. 25 poles, 1 to 58 inclusive.—.98 miles							
4,000	1	4 Copper	.....	6 B.W.G. Iron	May 16, 1916	Aug.11, 1916	Oct. 23,1916
13,200	1	1/0 Alum	8 Copper	¼" Gal. Steel	June 1, 1912	June 29, 1912	July 17,1912
"	1	3/0 "	8 "	¼" "	July 15, "	Aug. 19, "	Sept. 7, "

Description of

NIAGARA

Sec. No.	From	To	Length of Pole	Span	Miles	No. of Poles
			feet	feet		
47	Dundas Sub	Caledonia	40	120	14.36	674
47a	Caledonia	Paris Alabastine Co			.22	
					These Circuits carried on	
48	Caledonia	Junction Pole No. 940	40	120	5.87	267
49	Junction Pole No. 940	Hagersville	40	120	3.79	176
50	" No. 940	Lythmore	40	120	4.98	230
55	St. Thomas Sub. H.E.P.C.	L.L.E. Ry. Sub	40	120	1.68	88
56	Port Credit	Toronto Golf Club	30	120	3.24	11
56a	Extension from Sect. L.T. 56 on T.G.C. property				Carried on Section .90	37
57	O. A. College	Guelph Prison Farm. Pole 156	40	120	1.93	86
57a	Guelph Prison Farm	Property	40	120	.08	4
58	Guelph Prison Farm, Pole 156	Junction Pole No. 454	40	120	6.42	297
59	Junction Pole No. 454	Acton	40	120	5.82	268
60	St. Catharines	Port Dalhousie	30	120	3.18	142
61	Caledonia Sub	Caledonia			.30	
					Carried on	
62	Junction Pole No. 230 L.T. 27	Milton	40	120	16.65	740
63	Preston Sub	Doon Twine Mill	35	120	4.18	208
					Carried on Section	
64	Mimico Sub	Mimico Asylum			1.51	17
					Carried on Section	
65	Acton	Georgetown	40	120	9.03	411
66	Junction Pole No. 454	Rockwood	35	120	1.64	77
68	Brant Station	Paris	40	120	3.21	152
69	" "	Brantford	40	120	6.66	320
71	Waterloo	Elmira	40	120	10.93	518
72	Preston	Breslau	40	120	6.48	293
73	Niagara Falls	Junction Pole 113	48	250	5.00	113
74	Junction Pole 113	Union Carbide Co	48	250	10.50	235
75	" 303	Electric Steel & Metal Co	48	250	1.93	45
76	Junction Pole No. 38, L.T. 18	Crumlin Junction	35	132	5.31	218
77	Crumlin Junction	Thorndale	35	132	7.91	310
78	" "	Thamesford	35	132	6.85	281
79	Jct. Pole No. 381 L.T. 62	Streetsville	45	120	.43	19
81	Essex Station	Jct. Pole No. 55	45	120	1.10	55
82	Jct. Pole No. 55	Windsor	45	120	2.27	102
83	Jct. Pole No. 55	Walkerville	40	120	1.30	61
84	Kent Station	Chatham	40	132	1.93	99
85	Jct. Pole No. 118 L.T 57	Jct. Pole No. 776, L.T. 85	40	120	14.61	658
86	" " 776 " 85.	Elora	40	120	1.18	58
87	" " 776 " 85.	Fergus	35	120	1.96	94
88	Paris	Junction Pole No. 313	35–40	132	7.41	312
89	Jct. Pole No. 313 L.T. 88	Ayr	40	120	1.20	58
90	Jct. Pole No. 313 L.T. 88	Drumbo	35	132	6.83	284
91	Drumbo	Princeton	35	132	5.65	233
92	Drumbo	Plattsville	35	132	7.35	299
					1.00 miles carried	
93	Jct. Pole No. 388 L.T. 77	Deller Bros	30	132	.89	48
94	Jct. Pole No. 1005 L.T. 65	I. P. B. Co	35	132	5.08	221
95	London	Lambeth (Pole No. 462)	40	120	10.15	463
96	Lambeth (Pole No. 462)	Komoka Jct. (Pole No. 759)	40	120	6.58	298
97	Komoka Jct. (Pole No. 759)	Mt. Brydges (Pole No. 943)	40	120	4.00	184
98	Mt. Brydges (Pole No. 943)	Strathroy (Pole No. 1,368)	40	120	9.27	424
99	London	Lucan	35–40	132	19.18	783
99c	London	Lucan			21.51	
					These circuits carried	
100	Niagara Falls	Elec. Devel. Co.	45	100	1.25	52

Lines—Continued

SYSTEM

Voltage	No. of Circuits	Power Cables B. & S. Gauge	Telephone Wires, B. & S. & B. W. G. Gauge	Ground Wire.	Work Commenced	Work Completed	In Operation
13,200	1	3/0 Alum	8 Copper.	¼" Gal. Steel	May 10, 1912	Sept. 18, 1912	Sep. 20, 1912
2,200	1	2/0 Copper	.....	.....	Sept. 5, "	Sept. 18, "	" 20, "
Section L.T. 49 poles.							
13,200	1	3/0 Alum	8 Copper	¼" Gal. Steel	June 22, "	Sept. 18, "	Sep. 20 "
"	1	2 "	10 "	¼" "	Feb. 28, 1913	May 2, 1913	Aug. 15, 1913
"	1	3/0 "	8 "	¼" "	June 15, 1912	Sept. 18, 1912	Sep. 20 "
"	1	2 "	8 "	¼" "	Aug. 9, "	Oct. 11, "	Oct. 27, 1912
2,200	1	6 D.B.W.P. Copper	.....	.....	June 10, "	Aug. 3, "	Aug. 6 "
L.T. 36 poles							
2,200	1	6 "	.....	.....	Nov. 22, "	Jan. 3, 1913	Dec. 24 "
13,200	1	2 Alum	8 Copper	¼" Gal. Steel	Aug. 19, "	Dec. 14, 1912	Dec. 14 "
"	1	2 "	10 "	¼" "	May 14, 1913	May 19, 1913	Sep. 4 "
"	1	2 "	8 "	¼" "	Aug. 19, 1912	Dec. 14, 1912	Dec. 14, 1912
"	1	2 "	8 "	¼" "	" 19, 1912	Dec. 14, 1912	Dec. 14 "
2,200	1	1/0 "	.....	.....	Oct. 16, 1912	Nov. 21, "	Nov. 17 "
"	1	4 D.B.W.P. Copper	.....	.....	Nov. 20, 1912	Nov. 30, "	Nov. 30 "
Section L.T. 47 poles.							
13,200	1	3/0 Alum	10	¼" Gal. Steel	Nov. 25, 1912	Mar. 13, 1913	Mar. 13, 1913
6,600	1	2 "	.....	.....	Dec. 2, 1912	Apl. 11, "	Apl. 1 "
L.T. 17 poles, No. 1 to 11, inclusive. L.T. 35 from 11 to 17 inclusive.							
2,200	1	2 Copper	.....	.....	Mar. 30, 1912	Feb. 3, "	Apl. 26 "
L.T., 36 poles							
13,200	1	3/0 Alum	10 Copper	¼" Gal. Steel	Mar. 11, 1913	Aug. 1, "	Aug. 1 "
"	1	2 "	10 "	¼" "	May 6, 1913	July 3, "	Aug. 1 "
26,400	2	3/0 Alum	10 "	¼" "	Nov. 11, 1913	Jan. 2, 1914	Jan. 3, 1914
26,400	2	3/0 "	10 "	¼" "	Dec. 15, 1913	Jan. 17, "	Jan. 17 "
13,200	1	2 "	10 "	¼" "	May 17, 1913	Oct. 14, 1913	Oct. 25, 1913
6,600	1	2 "	10 "	¼" "	Apr. 4, 1913	Dec. 23, 1913	Dec. 23, 1913
46,000	3	4/0 Copper	8 "	¼" "	Mar. 15, 1914	Steel Towers.	Aug. 20, 1914
46,000	3	4/0 "	8 "	¼" "	Mar. 15, 1914		
				¼" "			Aug. 20, 1914
46,000	1	2/0 "	8 "	¼" "	July 11, 1914		Oct. 17, 1914
13,200	1	2 Alum	.....	¼" "	Sept. 18, 1913	May 8, 1914	Jan. 27, 1914
"	1	2 "	.....	¼" "	Oct. 10, 1913	Feb. 6, 1914	Feb. 6 "
"	1	2 "	.....	¼" "	Oct. 13, 1913	Jan. 19, "	Jan. 27 "
"	1	2 "	10 Copper	¼" "	Nov. 1, 1913	Nov. 24, 1913	Nov. 24, 1913
26,400	4	3/0 "	10 "	¼" "	July 28, 1914	Sept. 6, 1914	Sep. 6, 1914
"	2	3/0 "	10 "	¼" "	July 31, 1914	Sept. 18, 1914	Sep. 18 "
"	2	3/0 "	10 "	¼" "	June 2, 1914	Aug. 1, 1914	Sep. 6 "
"	2	2/0 "	10 "	¼" "	Oct. 21, 1914	Feb. 22, 1915	Feb 1, 1915
13,200	1	3/0 "	10 "	¼" "	June 3, 1914	Oct. 17, 1914	Oct. 22, 1914
"	1	3/0 "	10 "	¼" "	Aug. 18, 1914	Oct. 28, 1914	Oct. 22 "
"	1	3/0 "	10 "	¼" "	Aug. 1, 1914	Oct. 13, 1914	Oct. 22 "
26,400	1	1/0 "	10 "	¼" "	July 21, 1914	Nov. 30, 1914	Dec. 1 "
"	1	1/0 "	10 "	¼" "	Sept. 15, 1914	Nov. 30, 1914	Dec. 1 "
"	1	1/0 "	10 "	¼" "	July 13, 1914	Nov. 30, 1914	Dec. 1 "
4,000	1	6 Copper	.....	¼" "	Aug. 17, 1914	Nov. 30, 1914	Dec. 18 "
"	1	4 "	.....	¼" "	Aug. 17, 1914	Nov. 30, 1914	Dec. 1 "
on L.T. 90	Poles						
4,000	1	6 "	.....	¼" "	Mar. 19, 1914	Mar. 19, 1915	Mar. 19, 1915
13,200	1	1/0 Alum	10 Copper	¼" "	June 10, 1914	June 31, 1914	July 3, 1914
"	1	3/0 "	10 "	¼" "	Sept. 1, 1914	Nov. 30, 1914	Nov. 30 "
"	1	3/0 "	10 "	¼" "	Oct. 15, 1914	Nov. 30, 1914	Nov. 30 "
"	1	3/0 "	10 "	¼" "	Sept. 29, 1914	Nov. 30, 1914	Nov. 30 "
"	1	3/0 "	10 "	¼" "	Sept. 14, 1914	Nov. 30, 1914	Nov. 30 "
"	1	2 S.R. "	10 BWG Iron	¼" "	Oct. 23, 1914	Jan. 20, 1915	Jan. 21, 1915
"	1	2 S.R. "	.....	.....	July 3, 1916	Dec. 7, 1916	Dec. 7 1916
on L.T. 18 poles 1 to 38, L.T. 19 poles 38 to 100 and L.T. 99.							
12,000	2	4/0 Copper	9 BWG Iron	¼" Gal. Steel	Oct. 27, 1915	Oct. 31, 1915	Oct. 31 1915

Description of

NIAGARA

Sec. No.	From	To	Length of Pole.	Span.	Miles	No. of Poles
			feet	feet		
101	Kent Sta. Pole No. 40....	Tilbury.....	30	132	16.91	85
					15.00 miles carried	
102	Kent Station.....	Junction No. 68	40	120	1.48	68
102a	"	Junction No. 68	.....	.....	1.48	.....
102b	"	Junction Pole No. 68....	.....	.....	1.48	.....
103	Junction Pole 68, L.T. 102	Junction Pole No. 519....	40	120	9.98	451
103a	" " 68 L.T. 102	Junction Pole No. 519....	.....	.....	9.98	.....
104	" " 519 L.T. 103	Wallaceburg	40	120	8.50	386
105	" " 519 L.T. 103	Dresden.....	40	120	7.40	309
106	" " 289 L.T. 8	Embro.....	35	132	6.10	254
107	" " 564 L.T. 34	Woodbridge.....	35	132	6.44	277
108	Woodbridge	Bolton.....	35-40	132	13.03	540
109	Junction Pole.....	W. T. & I.Ry.....	.....	.....	.02	2
110	Mimico Sub-Station	Prison Brick Yard.....	30	125	.71	32
111	Brant Sub-Station	Junction Pole 249.....	35-40	132	5.84	249
112	Junction Pole 249 L.T. 111	Burford.....	35	132	3.48	142
113	" " 249 L.T. 111	Waterford	35-40	132	14.20	616
114	Waterford.....	Simcoe	35	132	8.90	366
115	Tilbury	Comber.....	30	132	7.26	306
116	Delaware Sub-Station ...	Lambeth	40	120	6.58	.....
					Carried on	
117	" Junc. Pole 759,..	Mount Brydges	40	120	4.60	.....
					Carried on	
118	Bertram's Sub-Station, Pole No. 69-L.T. 43....	Dundas	55	.....	.37	21
119	Junction Pole 759L. T. 96	Delaware Sub-Station ...	55	120	.09	5
					Lambeth & Mt. Brydges	
121	St. Thomas.....	Dutton	30	132	18.50	756
122	Ridgetown.....	Highgate	.....	.....	6.18	9
					These circuits carried on	
123	Junction Pole 68 L.T. 102	Thamesville	35	132	14.60	683
124	Junction Pole 676 L.T. 123	Bothwell	35	132	9.83	410
125	Stratford.....	Tavistock	35	132	9.72	398
126	Junction Pole 68 L.T. 102	Blenheim	35	132	9.52	390
127	Junction Pole 469 L.T. 123	Ridgetown.....	35	132	8.02	333
128	Brant	St. George	30	132	9.09	369
					4.50 miles carried	
129	Dundas	Lynden.....	35	132	12.75	430
130	Lucan.....	Ailsa Craig	30	132	10.14	410
131	Dresden	Petrolia	35-40	125	21.78	947
132	Petrolia	Wyoming Jct. Pole 1963 .	40	125	4.85	220
133	Wyoming Jct. Pole 1963 ..	Perch Jct. Pole 2305.....	35	125	7.92	343
134	Lucan.....	Granton	30	132	6.95	246
135	Perch Jct. Pole 2305.....	Sarnia.....	35	125	7.73	332
136	Lucan.....	Exeter.....	35	132	13.24	552
137	Petrolia	Wyoming	25	132	e 7.50	e 25
138	Sebringville Junction Pole 311 L.T. 146	Milverton Jct. Pole 802..	35	132	11.90	491
139	Milverton Jct. Pole 802..	Milverton	35	132	.96	40
140	" " 802..	Listowel Jct. Pole 1313 ..	35	132	12.65	512
141	Listowel Jct. Pole 1313..	Listowel	35	132	2.77	122
142	" " 1313..	Palmerston	35	132	10.48	431
143	Palmerston	Harriston	35	132	6.11	259
145	Wyoming Jct. Pole 1963.	Forest.....	35-40	132	20.10	817
146	Stratford Sub	Jt. Pole311 (Sebringville)	40	120	6.81	311
147	Jct.Pole 311(Sebringville)	Jct. Pole 648 (Mitchell)..	40	120	7.61	337
148	Jct. Pole 648 (Mitchell)..	Jct. Pole 1152 (Seaforth).	40	120	11.36	505
149	Jct. Pole 1152 (Seaforth)	Jct. Pole 1547 (Clinton)..	40	120	8.84	395
150	Jct. Pole 1547 (Clinton)..	Goderich	40	120	13.61	612
151	Exeter	Hensall	30	132	6.19	259
152	Niagara Falls Sub	Ont. Power Co. Line.....	40	125	.31	17

Lines—Continued

SYSTEM

Voltage.	No. of Circuits	Power Cables B. & S. Gauge	Telephone Wires, B.&S. & B.W.G. Gauge	Ground Wire	Work Commenced	Work Completed	In Operation
26,400	1	2 S.R. Alum	10 BWG Iron	¼" Gal. Steel	Jan. 13, 1915	May 12, 1915	Mar. 3,1915
on H.T. Telephone Poles							
26,400	1	1/0 "	10 "	¼" "	Oct. 28, 1914	Feb. 3, "	Feb. 3, "
"	1	3/0 "	.....	.....	June 22, 1915	June 29, "	June 29 "
"	1	3/0 "	.....	.....	Oct. 7, "	Oct. 13, "	Oct. 13 "
"	1	1/0 "	10 BWG Iron	¼" Gal. Steel	Oct. 30, 1914	Feb. 3, "	Feb. 3 "
"	2	3/0 "	.....	.....	Oct. 12, 1915	Mar. 15, 1916	Mar.15,1916
"	1	1/0 "	10 BWG Iron	¼" Gal. Steel	Nov. 6, 1914	Feb. 3, 1915	Feb. 3 1915
"	2	3/0 "	10 "	¼" "	Nov. 3, "	May 1, "	Mar. 30 "
13,200	1	1/0 "	10 "	¼" "	Oct. 1, "	Dec. 24, 1914	Dec. 22,1914
"	1	1/0 "	10 "	¼" "	Sept.25, "	Oct. 21, "	Dec. 2 "
"	1	1/0 "	10 "	¼" "	Oct. 20, "	Nov. 26, "	Jan. 26,1915
"	1	2 "	10 "	.....	Sep. 12, "	Sep. 12, "	Sep. 13,1914
2,200	1	2/0 Copper	.....	.....	Oct. 24, "	Feb. 17, 1915	Feb. 17,1915
26,400	1	2 S.R. Alum	10 BWG Iron	¼" Gal. Steel	Nov. 6, "	May 4, "	May 6 "
"	1	2 S.R. "	10 "	¼" "	Nov. 21, "	May 28, "	May 6 "
"	1	2 S.R. "	10 "	¼" "	Nov. 21, "	May 5, "	May 10 "
"	1	2 S.R. "	10 "	¼" "	Nov. 26, "	May 7, "	May 9 "
4,000	1	1/0 Copper	.....	¼" "	Jan. 14, 1915	May 8, "	Apr. 20 "
"	1	6 Copper	.....	¼" "	Jan. 25, "	Mar. 12, "	Mar. 15 "
L.T. 96 poles							
4,000	1	6 M.H.D.	.....	¼" "	Jan. 7, "	Jan. 23, "	Mar. 1 "
L.T. 97 poles							
13,200	1	1/0 Alum	10 BWG Iron	¼" "	Feb. 25. "	Mar. 15, "	Mar. 15 "
"	1	3/0 "	10 "	¼" "	Jan. 27, "	Mar. 9, "	Feb. 1 "
4,000 v. circuit carried on L.T. 119 poles							
13,200	1	1/0 Alum	.....	¼" "	May 3, "	Aug. 21, "	Aug. 27 "
4,000	1	6 B.W.G.Iron	.....	6 B.W.G.Iron	Oct. 3, 1916	Nov. 4, 1916	Nov. 6,1916
H.T. relay poles.							
26,400	1	1/0 Alum	9 BWG. Iron	¼" Gal. Steel	May 18, 1915	July 14, 1915	Sep. 14,1915
"	1	2 S.R. "	9 "	¼" "	June 26, "	Aug. 17, "	Aug. 17 "
"	1	6 B.W.G.Iron	9 "	6 B.W.G.Iron	Sept. 9, "	Sep. 5, 1916	Oct.26,1916
"	1	2 S. R. Alum	9 "	¼" Gal. Steel	July 2, "	Oct. 7, 1915	Oct. 20,1915
"	1	2 "	9 "	¼" "	June 24, "	Sep. 7, "	Nov. 24 "
4,000	1	2 "	9 "	¼" "	July 1, "	Aug. 17, "	Aug. 17 "
on H.T. Tel. and Relay line							
13,200	1	2 S.R. Alum	9 BWG. Iron	¼" "	July 24, "	Oct. 15, "	Oct. 22 "
4,000	1	2 S.R. "	.....	¼" "	July 28, "	Dec. 11, "	Dec. 15 "
26,400	2	3/0 "	9 BWG Iron	¼" "	Aug. 30, "	Feb. 18, 1916	Apl. 6,1916
"	2	3/0 "	9 "	¼" "	Mar. 1, 1916	Sep. 12, "	Nov. 10 "
"	2	3/0 "	9 "	¼" "	Apl. 6, "	Sep. 29, "	Nov. 10 "
4,000	1	6 Copper	.....	6 B.W.G.Iron	Apl. 6, "	May 27, "	June 29 "
26,400	2	3/0 Alum	9 B.WG. Iron	¼" Gal. Steel	May 9, "	Nov. 4, "	Nov. 10 "
13,200	1	3/0 "	9 "	¼" "	Nov. 26, 1915	May 4, "	May 4 "
4,000	1	6 Copper	9 "	.....	Sept. 1. "	Oct. 4, "	Oct. 4 "
26,400	1	1/0 S.R.Alum	9 BWG. Iron	¼" Gal. Steel	Sept. 20, "	May 15, "	May 18 "
"	1	2 "	9 "	¼" "	Oct. 15, "	May 18, "	May 18 "
"	1	1/0 "	9 "	¼" "	Oct. 13, "	May 22, "	May 27 "
"	1	2 "	9 "	¼" "	Oct. 28, "	May 22, "	May 27 "
"	1	1/0 "	9 "	¼" "	Oct. 14 "	June 6, "	June 6 "
"	1	1/0 "	9 "	¼" "	Dec. 10, "	June 30, "	June 30 "
"	1	6 B.W.G Iron	9 "	¼" "	June 26, "	Dec. 4, "	Feb. 7, 1917
"	2	3/0 Alum	10 Copper	¼" "	Apl. 23, 1913	June 4, 1914	Dec.23, 1914
"	2	3/0 "	10 "	¼" "	Apl. 23, "	June 4, "	Dec. 23 "
"	2	3/0 "	10 "	¼" "	Apl. 23, "	June 4, "	Dec. 23 "
"	2	3/0 "	10 "	¼" "	Apl. 23, "	June 4, "	Dec. 23 "
"	2	3/0 "	10 "	¼" "	Apl. 23, "	June 4, "	Dec. 23 "
4,000	1	6 Copper	.....	6 B.WG. Iron	Sept. 11, 1916	Dec. 21. 1916	Dec. 21, 1916
12,000	2	2/0 "	.....	.....	Oct. 24, "	Nov. 1, 1916	Nov. 5, 1916

Description of

NIAGARA

Sec. No.	From	To	Length of Pole	Span	Miles	No. of Poles
			feet	feet		
153	Dutton	West Lorne Sub-Station..	30	132	7.62	312
				This circuit carried		
154	West Lorne Sub-Station	Rodney	30	132	4.00	161
				This circuit carried		
155	Etobicoke Sub-Station	New Toronto Sub-Station	45	125	2.78	126
157	Wanstead Jct. Pole 2336 L.T 145	Watford	35	132	10.82	442
158	Junction Pole L.T. 67	Dublin	30	150	1.26	47
159	Exeter Sub-Station	Sarepta Jct. 319	30	132	7.58	319
				This circuit carried		
160	Sarepta Jct. 319	Dashwood	30	132	1.35	55
161	Sarepta Jct. 319	Zurich	30	132	5.15	211
163	Cooksville Sub-Station	Ont. Nat. Brick Co.	55	120	1.07	89
				This circuit carried		
164	Welland	Dunnville	E 35	176	22.50	648
165	Essex Sub-Station	Sandwich Salt Co.	40	132	8 10	351
172	Jct. Pole 1445 L.T. 131	Oil Springs	35	132	1.42	65
173	Jct. Pole 1445 L.T. 131	Brigden	35	132	8.88	364
174	St. Thomas Sub-Station, Jct. Pole 107 L.T. 141	Aylmer	35	132	9.60	406
178	Palmerston	Drayton	E 30	150	11.00	396
179	Erindale Power House	Cooksville Sub-Station	35	132	3.11	128

SEVERN

S. L.						
1	Waubaushene	Jct. Pole 193 (Coldwater).	40	120	4.29	193
2	Jct. Pole 193 (Coldwater).	Coldwater	40	120	1.16	55
3	" " 193 "	Jct. Pole 903 (Elmvale)..	40	120	15.86	710
4	" " 903 (Elmvale)	Elmvale	40	120	.42	19
5	" " 903 "	Jct. Pole 1110 (Phelpston)	40	120	4.55	207
6	" " 1110 (Phelpston).	Barrie	40	120	12.27	550
7	" " 1110 "	Jct. Pole 1785 (Stayner)	40	120	15.07	675
8	" " 1785 (Stayner)	Stayner	40	120	1.50	68
9	" " 1785 "	Collingwood	40	120	11.86	530
10	Stayner	Creemore	35	120	7.67	348
12a	Waubaushene Pole 540	Victoria Harbor Jct. 730.	35	100	3.59	190
14a	Victoria Harbor Jct. 730	Port McNicholl Jct. 969..	35	100	4.02	213
15	Port McNicholl Jct. 969	Port McNicholl	35	120	.50	35
17	Midland	Penetang	40	120	4.69	223
20	Port McNicholl Jct. 943	C.P.R. Elevators	35	125	1.34	58
21	Jct. Pole 1590 S.L 6	Camp Borden	35	132	14.34	604
24	Barrie Sub-Station	Jct. Pole 1 (Painswick Tap)	E 40	125	4.00	173
25	Jct. Pole 1 (Painswick Tap)	" " 2 (Thornton Tap)	E 40	125	4.50	194
26	" " 2 (Thornton Tap)	" " 3	E 40	125	6.25	273

ST. LAWRENCE

ST.L.						
1	Morrisburg	Prescott	40	120	22.96	1,083
2	"	Winchester	40	120	16.29	747
3	Winchester	Chesterville	40	120	6.52	294
5	Prescott	Brockville	40	120	14.08	639
6	Morrisburg	North Williamsburg			6.50	
This circuit carried on St. L. 2 poles						

E—Estimated.

Lines.—Continued.

SYSTEM

Voltage	No. of Circuits	Power Cables B.&S. Gauge	Telephone Wires, B.&S. & B.W.G. Gauge	Ground Wire	Work Commenced	Work Completed	In Operation
13,200	1	6 BWG Iron	.....	.....	Dec. 4, 1916	Jan. 19, 1917	Dec. 22, 1916
on H.T. Telephone and Relay Poles.							
4,000	1	6 MHD Copper	.....	6 BWG Iron	Jan. 2, 1917	Jan. 17, "	Jan. 15, 1917
on H.T. Telephone and Relay Poles.							
.....	.....	.....	.....	¼" Steel	Feb. 9, "	.....	.....
26,400	1	6 BWG Iron	9 BWG Iron	¼" "	June 9, "	Aug. 5, 1917	Aug. 10, 1917
4,000	1	6 Bare Copper	.....	6 BWG Iron	June 18, "	July 7, "	.....
4,000	1	2 S.R. Alum	.....	¼" Steel	Mar. 21, "	June 13, "	Aug. 23, 1917
on L.T. 151 Poles 1 to 54,							
4,000	1	6 MHD Bare Copper	.....	¼" "	Mar. 29, "	June 14, "	Aug. 23, "
4,000	1	2 S.R. Alum	.....	¼" "	Mar. 29, "	June 18, "	Aug. 23, "
13,200	1	2 S.R. "	10 C.C. Steel	¼" "	Mar. 6, "	Apr. 22, "	Apr. 22 "
on L.T. 27 from Pole 1 to 30—55 miles.							
44,000	1	5/16 Steel	9 BWG Iron	¼" "	Aug. 17, "	.....	.....
26,400	2	1/0 B&S Cop.	9 "	¼" "	July 10, "	Oct. 12, 1917	.....
26,400	1	6 BWG Iron	9 "	¼" "	July 20, "	Sept. 22, "	.....
26,400	1	6 BWG Iron	9 "	¼" "	Aug. 1, "	Sept. 22, "	.....
13,200	1	¼" Steel	9 "	¼" "	Aug. 27, "	Oct. 27, "	.....
4,000	1	4 B & S Bare Copper	.....	6 BWG Iron	Oct. 24, "	.....	.....
13,200	1	4 B & S "	9 BWG Iron	9/32" Steel	Oct. 27, "	.....	.....

SYSTEM

22,000	2	4/0 Alum	10 Copper	¼" Gal. Steel	Sep. 20, 1912	Feb. 18, 1913	Feb. 24, 1913
"	1	2 "	10 "	¼" "	Sep. 20, "	Feb. 18, "	Feb. 24 "
"	2	4/0 "	10 "	¼" "	Sep. 25, "	Feb. 18, "	Feb. 24 "
"	1	2 "	10 "	¼" "	Feb. 1, 1913	May 17, "	May 27 "
"	2	4/0 "	10 "	¼" "	Oct. 20, 1912	Feb. 18, "	Feb. 24 "
"	2	2/0 "	10 "	¼" "	Nov. 6, "	Apl. 5, "	April 6 "
"	2	3/0 "	10 "	¼" "	Oct. 23, "	Feb. 18, "	Feb. 24 "
"	1	2 "	10 "	¼" "	Jan. 24, 1913	Apl. 26, "	Sep. 25 "
"	2	3/0 "	10 "	¼" "	Nov. 1, 1912	Feb. 18, "	Feb. 24 "
4,000	1	1/0 "	.....	¼" "	Aug. 15, 1914	Oct. 25, 1914	Oct. 21, 1914
22,000	2	1/0 "	10 Copper	¼" "	Apl. 1, 1916	May 5, 1916	July 24, 1916
"	2	1/0 "	10 "	¼" "	Mar. 7 "	May 5 "	July 24 "
4,000	1	1/0 "	10 "	¼" "	Oct. 15, 1914	Dec. 25, 1914	Dec. 24, 1914
22,000	2	1/0 Copper	10 "	¼" "	June 7, 1911	July 18, 1911	July 18, 1911
"	2	1/0 Alum	9 B.W.G. Iron	¼" "	Feb. 29, 1916	Apl. 14, 1916	July 24, 1916
"	1	6 Copper	9 " "	6 B.W.G. Iron	May 30 "	July 11, 1916	June 29 "
22,000	1	1/0 S R Alum	9 " "	¼" Steel	Sept. 13, 1917	.....	.....
"	1	1/0 "	9 " "	¼" "	Oct. 6, "	.....	.....
"	1	1/0 "	9 " "	¼" "	Oct. 20, "	.....	.....

SYSTEM

26,400	1	5/16 Steel	10 Copper	¼" Gal. Steel	Oct. 29, 1912	June 14, 1913	Oct. 23, 1913
"	1	5/16 "	10 "	¼" "	June 4, "	Dec. 15, 1913	Dec. 18 "
"	1	3/0 Alum	10 "	¼" "	Sept. 6, 1913	Feb. 17, 1914	Feb. 7, 1914
"	1	3/0 "	10 "	¼" "	Oct. 16, 1914	Mar. 20, 1915	Apr, 4, 1915
2,200	1	6 Copper	.....	.....	Feb. 22, 1915	Mar. 20, "	Mar. 20, "

Description of

WASDELL'S FALLS

Sec. No.	From	To	Length of Pole	Span	Miles	No. of Poles
W.L.						
1	Wasdell's Falls	Jct. No. 1 Pole 1203	40	120	25.50	1,203
1a	" "	Junction Pole 183	40	120	3.94	.....
	Carried on W.L. 1 Poles					
2	Jct. No. 1 Pole 1203	Beaverton	40	120	1.47	70
3	Jct. No. 1 " 1203	Cannington	40	120	9.67	442
4	Beaverton	Gamebridge	.....	.....	6.50	.....
	Carried on Sec. W.L. 1 & 2 poles					
5	Gamebridge	Brechin	.....	.....	3.75	.....
	Carried on Sec. W.L. 1 poles					
6	Cannington	Woodville	30	120	5.15	147
7	Cannington	Sunderland	30	120	7.40	335
8	Jct. Pole 183 W.L. 1	Longford	35	132	6.41	269

EUGENIA FALLS

EFL						
1	Eugenia Falls Pwr. House	Chatsworth Sub-Station.	40	125	22.15	972
2	Chatsworth Sub-Station.	Owen Sound	40	125	9.22	394
3	Eugenia Falls	Flesherton	40	125	6.78	296
4	Flesherton Jct. Pole 296.	Durham Jct. Pole 964	40	125	15.97	687
5	Durham Jct. Pole 964	Mount Forest	40	125	15.70	692
6	Laurel Jct	Grand Valley	35	132	8.50	357
7	Durham Jct. Pole 964	Hanover Jct. Pole 1491	40	125	12.09	526
8	Hanover Jct Pole 1491	Chesley	40	125	11.06	473
9	Flesherton Jct. Pole 296.	Dundalk	40	125	11.73	500
10	Dundalk	Shelbourne	40	125	13.16	562
11	Hanover Jct. Pole 1491	Hanover	40	125	.76	34
12	Eugenia Falls	Markdale	.....	.....	6.50	.....
		Car'd on Sec. EFL 1, poles				
13	Eugenia Falls	Flesherton	.....	.....	7.50	.....
		Car'd on Sec. EFL 3, poles				
14	Durham Jct. 1326 E.F.L.5	Holstein	30	130	2.63	107
		Car'd on Sec. EFL 5, poles				
15	Junction Pole 1190	Kilsyth Sta	40	125	4.76	205
16	Kilsyth Station	Tara	40	125	6.80	292
17	Shelbourne	Orangeville	30	130	14.61	614
18	"	Horning's Mills	30	130	5.13	215
19	Eugenia Falls	Meaford Jct. Pole 186	35–40	132	4.00	186
20	Meaford Jct. Pole 186	Collingwood	35–40	132	20.17	885
21	Orangeville	Alton	30	132	5.75	253
22	Grand Valley	Arthur	30	120	12.50	539

MUSKOKA

M L.						
1	South Falls	Huntsville	35	132	26.32	1,142

CENTRAL ONTARIO

C.O.S.						
1607 (a) 1723	Napanee	Newburgh (Houpt Paper Mills)	30	132	7.91	.....
			This circuit carried on C.O.L. 50			
E-IB	Healey Falls	Trenton	40	176	30.53	975
C.O.L. 50	Napanee Sub-Station	Kingston	40	175	26.50	863

Lines.—Continued

SYSTEM.

Voltage	No. of Circuits	Power Cables B. & S. Gauge	Telephone Wires, B. & S. & B.W.G. Gauge	Ground Wire	Work Commenced	Work Completed	In Operation
22,000	1	5/16 Steel	10 Copper	¼" Gal. Steel	Jan. 17, 1914	Sep. 28, 1914	Sep. 28, 1914
"	1	1/0 Alum	.....	.....	July 6, 1916	July 23, 1916	July 23, 1916
"	1	¼" Steel	10 Copper	¼" Gal. Steel	Mar. 30, 1914	Sep. 28, 1914	Sep. 28, 1914
"	1	¼" "	10 "	¼" "	Feb. 18, "	Sep. 28 "	Sep 28 "
4,000	1	1/0 Alum	.....	.....	May 2, "	.....	Oct. 6 "
4,000	1	1/0 "	.....	.....	July 25, "	.....	Oct. 6 "
4,000	1	1/0 "	.....	¼" Gal. Steel	May 19, "	.....	Oct. 19 "
4,000	1	1/0 "	.....	¼" "	June 1, "	July 10, 1914	Oct. 19 "
22,000	1	1/0 "	9 B.W.G. Iron	¼" "	Feb. 17, 1916	May 27, 1916	June 4, 1916

SYSTEM

22,000	2	3/0 Alum	9 B.W.G. Iron	¼" Gal. Steel	Mar. 17, 1915	July 7, 1915	Nov. 18, 1915
"	2	3/0 "	9 "	¼" "	Apr. 7, "	Sep. 24. "	Nov. 18 "
"	2	3/0 "	9 "	¼" "	Apr. 10, "	July 21, "	Nov. 18 "
"	2	3/0 "	9 "	¼" "	Apr. 13, "	July 11, "	Nov. 18 "
"	2	5/16 Steel	9 "	¼" "	Apr. 26, "	Aug. 25, "	Nov. 18 "
"	1	6 Copper	9 "	¼" "	July 21, 1916	Dec. 1, 1916	Dec. 1, 1916
"	1	3/0 Alum	9 "	¼" "	Oct. 19, 1915	Aug. 19, 1916	June 18, 1916
"	1	3/0 "	9 "	¼" "	Dec. 4 "	June 10, "	June 18 "
"	1	1/0 "	9 "	¼" "	May 20 "	Aug. 14, 1915	Nov. 18, 1915
"	1	1/0 "	9 "	¼" "	June 9 "	Aug. 24. "	Nov. 18 "
22,000	1	1/0 S.R Alum	9 "	¼" "	Aug. 18, 1916	Sep. 16, 1916	Sep. 16, 1916
4,000	1	2 S.R "	.....	.....	Dec. 28, 1915	Jan. 17 "	Feb. 8 "
4,000	1	2 S.R "	.....	.....	June 4 "	Aug. 16, 1915	Nov. 18, 1915
4,000	1	2 S.R. "	.....	.....	Dec. 10 "	Apl. 3, 1916	Apl. 3, 1916
22,000	1	6 B.W.G. Iron	9 B.W.G. Iron	¼" Galv. Steel	Nov. 7, 1916	Jan. 31, 1917	Jan. 1, 1918
4,000	1	6 Copper....	9 "	¼" "	Oct. 12 "	Jan. 19, 1917	Jan. 1, 1918
22,000	1	6 "	10 "	¼" "	June 13 "	June. 15, 1916	June 13, 1916
22,000	1	6 "	10 "	¼" "	June 13 "	June 13 "	June 13 "
"	1	1/0 "	9 "	¼" "	Aug. 21 "	Oct. 5 "	Oct. 6 "
"	1	1/0 "	9 "	¼" "	Aug. 14 "	Oct. 5 "	Oct. 6 "
4,000	1	4 "	.....	6 B.W.G. Iron	Oct. 17 "	Nov. 22 "	Nov. 27 "
4,000	1	4 "	.....	6 "	Oct. 30 "	Feb. 19, 1917	Feb. 19, 1917

SYSTEM

22,000	1	2 S.R. Alum	9 B.W.G. Iron	¼" Galv. Steel	Aug. 6, 1915	Apl. 29, 1915	Aug. 15, 1916

SYSTEM

4,000	1	6 Copper..	.....	6 B.W.G. iron	Nov. 23, 1916	Apr. 26, 1917	Apr. 23, 1917
from Pole 1 to Pole 47—94 miles = 94 miles							
44,000	1	2/0 B. & S. Copper	10 C.C. Steel	¼" Steel	June 9, 1917	.....	.....
44,000	1	1/0 B & S Bare Copper	9 B.W.G. Iron	¼" "	Dec. 5, 1916	.....	.....

Total Mileage of Lines and Number of Poles

—	To Oct. 31st, 1916	Oct. 31st, 1916, to Oct. 31st, 1917	Total to Oct. 31st, 1917
Total mileage low tension lines completed and under construction	1,321.19	263.16	1,584.35
Total mileage low tension lines completed	1,241.18	154.77	1,395.95
Total mileage low tension lines under construction	80.01	108.39	188.40
Total mileage single circuit lines	937.80	247.02	1,184 82
Total mileage double circuit lines	353.20	16.14	369.34
Total mileage three circuit lines	29.09	.....	29.09
Total mileage four circuit lines	1.10	.....	1.10
Total mileage telephone lines complete	1,076.05	97.48	1,173.53
Total mileage telephone lines under construction	50.23	97.39	97.39
Number of poles	54,372	9,449	63,821

NOTE.—Under total mileage low tension lines completed Oct. 31st, 1916, to Oct. 31st, 1917, 154.77 miles, includes total mileage low tension under construction to Oct. 31st, 1916, 80.01 miles.

Total Weights and Mileages of Cable and Wire

TRANSMISSION AND TELEPHONE LINES

Cable and Wire	Wire Miles				Weight in Pounds			
	Completed to Oct. 31st, 1916	Completed Oct. 31st, 1916 to Oct. 31st, 1917	Under construction to Oct. 31st, 1917	Completed and under construction to Oct. 31st, 1917	Completed to Oct. 31st, 1916	Completed Oct. 31st, 1916 to Oct. 31st, 1917	Under construction to Oct. 31st, 1917	Completed and under construction to Oct. 31st, 1917
Aluminum	4,006.18	46.38	.....	4,052.56	2,761,601	39,423	.....	2,801,024
Steel Reinforced Aluminum	608.53	41.40	44.25	694.18	306,907	20,575	34,714	362,196
Copper Wire	567.89	211.14	213.42	992.45	859,902	212,271	365,752	1,437,925
Copper Clad Steel Wire	1,139.44	16.86	61.06	1,217.36	194,357	26,706	96,719	317,782
Galv. Iron Wire	1,033.63	363.11	133.72	1,530.46	421,649	215,124	79,563	716,336
Galv. Steel Cable	1,196.61	28.80	67.50	1,292.91	758,171	19,929	79,312	857,412
Totals	8,552.28	707.69	519.95	9,779.92	5,302,587	534.028	656,060	6,492,675

The Mileage of Lines Tabulated According to Voltage and Number of Circuits

Transmission Lines

—	Single Circuit Totals			Double Circuit Totals			Three Circuit Totals			Four Circuit Totals			1-2-3-4-Circuit Totals			
Voltage	Completed to Oct. 31, 1916	Completed Oct. 31, 1916 to Oct. 31, 1917	Under Construction to Oct. 31, 1917	Completed to Oct. 31, 1916	Completed Oct. 31, 1916 to Oct. 31, 1917	Under Construction to Oct. 31, 1917	Completed to Oct. 31, 1916	Completed Oct. 31, 1916 to Oct. 31, 1917	Under Construction to Oct. 31, 1917	Completed to Oct. 31, 1916	Completed Oct. 31, 1916 to Oct. 31, 1917	Under Construction to Oct. 31, 1917	Completed to Oct. 31, 1916	Completed Oct. 31, 1916 to Oct. 31, 1917	Under Construction to Oct. 31, 1917	Completed to Oct. 31, 1917
46,000 } 44,000 }	1.93	.....	79.53	.....	.....	.....	15.50	.....	.....	.....	.....	.....	17.43	.....	79.53	17.43
26,400..	236.88	41.62	.....	108.32	15.83	.....	11.46	.....	.....	1.10	.....	.....	357.76	57.45	.....	415.21
22,000..	191.67	14.75	14.75	142.67	.....	.....	.....	.....	.....	.....	.....	.....	334.34	14.75	14.75	349.09
13,200..	290.55	18.29	3.11	88.54	.....	.....	.09	.....	.....	.....	.....	.....	379.18	18.29	3.11	397.47
12,000..	.....	.....	.....	1.25	.31	.....	.....	.....	.....	.....	.....	.....	1.25	.31	.....	1.56
6,600..	13.00	.....	.....	3.75	.....	.....	2.04	.....	.....	.....	.....	.....	18.79	.....	.....	18.79
4,000..	113.26	63.97	11.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	113.26	63.97	11.00	177.23
2,200..	18.54	.....	.....	.63	.....	.....	.....	.....	.....	.....	.....	.....	19.17	.....	.....	19.17
Total.	865.83	138.63	108.39	345.16	16.14	.....	29.09	.....	.....	1.10	.....	.....	1,241.18	154.77	108.39	1,395.95

Gauge, Length and Weight of Conductors

TRANSMISSION LINES

Browne & Sharpe Gauge	Wire Miles			Weight Pounds			Miles Single Circuit Lines			Miles Double Circuit Lines			Total Single Circuit and Double Circuit Lines completed Oct. 31, 1917
	Completed to Oct. 31, 1916	Completed Oct. 31, 1916, to Oct. 31, 1917	Under construction to Oct. 31, 1917	Completed to Oct. 31, 1916	Completed Oct. 31, 1916, to Oct. 31, 1917	Under construction to Oct. 31, 1917	Completed to Oct. 31, 1916	Completed Oct. 31, 1916, to Oct. 31, 1917	Under construction to Oct. 31, 1917	Completed to Oct. 31, 1916	Completed Oct. 31, 1916 to Oct. 31, 1917	Under construction to Oct. 31, 1917	
400,000 c.m. Alum.	1.54	.....	.....	3,032	.....	.....	.49	.....	.....	.....	.....	.....	.49
4/0 Aluminum.....	183.85	.....	.....	243,049	.....	.....	.....	.....	.....	30.49	.....	.....	30.49
3/0 "	2,041.50	46.38	.....	1,698,527	39,423	.....	217.50	.....	.....	214.20	7.73	.....	439.43
2/0 "	89.46	.....	.....	58,954	.....	.....	.....	.....	.....	14.20	.....	.....	14.20
1/0 "	1,045.01	.....	.....	546,539	.....	.....	225.16	.....	.....	53.25	.....	.....	278.41
2 "	644.82	.....	.....	211,500	.....	.....	117.85	.....	.....	43.43	.....	.....	161.28
2 S.R "	568.66	41.40	.....	276,367	20,575	.....	180.53	13.80	.....	.....	.....	.....	194.33
1/0 S.R "	39.87	.....	44.25	30,540	.....	34,714	12.66	.....	14.75	.....	.....	.....	12.66
250,000 c.m. Copper	1.54	.....	.....	6,246	.....	.....	.49	.....	.....	.....	.....	.....	.49
4/0 Copper.....	154.35	.....	.....	520,931	.....	.....	.....	.....	.....	16.75	.....	.....	16.75
2/0 "	9.00	25.59	91.59	19,107	55,786	199,666	2.86	7.91	30.53	.....	.31	.....	11.08
1/0 "	98.99	48.60	79.50	1,166,599	83,883	137,217	31.43	.....	26.50	.....	8.10	.....	39.53
2 "	10.71	.....	.....	11,331	.....	.....	3.40	.....	.....	.....	.....	.....	3.40
4 "	53.00	54.75	42.33	35,244	37,339	28,869	15.57	18.25	14.11	.63	.....	.....	34.45
6 "	240.30	82.20	.....	100,444	35,263	.....	76.29	27.40	.....	.....	.....	.....	103.69
1/4 in. Steel Cable.	.....	28.80	.....	.....	19,929	.....	.....	9.60	.....	.....	.....	.....	9.60
5/16 " Steel Cable.	.....	.....	67.50	.....	.....	79,312	.....	.....	22.50	.....	.....	.....	.....
6 B.W.G. Iron	.....	185.01	.....	.....	109,155	.....	.....	61.67	.....	.....	.....	.....	61.67
Totals.....	5,182.60	512.73	325.17	4,928,410	401,353	479,778	884.23	138.63	108.39	372.95	16.14	.....	1,411.95

NOTE.—A total of 16.00 miles occurs twice in the total mileage, due to there being circuits of different conductors on the same line.

Total Mileage Low Tension Telephone Lines

COMPLETED AND UNDER CONSTRUCTION TO OCTOBER 31, 1917

Sect. No.	Miles	Sect. No.	Miles	Sect. No.	Miles	Sect. No.	Miles	Sect. No.	Miles	Sect. No.	Miles	Sect. No.	Miles
L.T. 1..	2.84	L.T. 30	1.27	L.T. 72	6.48	L.T. 108	13.03	L.T. 147	7.61	S.L. 24	E 4.00	E.F.L. 10	13.16
" 2..	6.34	" 31	1.56	" 73	5.00	" 109	.02	" 148	11.36	" 25	E 4.50	" 11	.76
" 3..	1.13	" 32	.09	" 74	10.50	" 111	5.84	" 149	8.84	" 26	E 6.25	" 15	E 6.25
" 4..	.18	" 34	14.07	" 75	1.93	" 112	3.48	" 150	13.61			" 16	E 7.25
" 5..	1.64	" 35	.12	" 79	.43	" 113	14.20	" 157	10.82			" 17	E 14.61
" 6..	.76	" 36	5.75	" 81	1.10	" 114	8.90	" 163	.52	St. L. 1	22.96	" 18	E 5.13
" 7..	12.27	" 38	7.35	" 82	2.27	" 118	.37	" 164	E 22.50	" 2	16.29	" 19	4.00
" 8..	9.90	" 39	.63	" 83	1.30	" 119	.09	" 165	8.10	" 3	6.52	" 20	20.17
" 9..	11.12	" 40	1.50	" 84	1.93	" 123	14.60	" 172	1.42	" 5	14.08		
" 10..	10.30	" 40 A	1.92	" 85	14.61	" 124	9.83	" 173	8.88				
" 11..	4.59	" 41	12.27	" 86	1.18	" 125	9.72	" 174	9.60				
" 12..	1.13	" 43	1.21	" 87	1.96	" 126	9.52	" 179	3.11	W.L. 1	25.50	C.O.S.	
" 13..	1.75	" 45	.09	" 88	7.41	" 127	8.02			" 2	1.47	1,607 A	7.91
" 14..	2.04	" 46	2.22	" 89	1.20	" 128	9.09			" 3	9.67	C.O.S.	
" 15..	2.08	" 47	14.36	" 90	6.83	" 129	12.75	S.L. 1	4.29	" 8	6.41	1,723 E1 B	30.53
" 16..	3.75	" 48	5.87	" 94	5.08	" 131	21.78	" 2	1.16				
" 17..	.14	" 49	3.79	" 95	10.15	" 132	4.85	" 3	15.86			C.O.L 50	26.50
" 18..	.79	" 50	4.98	" 96	6.58	" 133	7.92	" 4	.42	M.L. 1	26.32		
" 19..	1.54	" 55	1.68	" 97	4.00	" 135	7.73	" 5	4.55				
" 20..	1.22	" 57	1.93	" 98	9.27	" 136	13.24	" 6	12.27				
" 21..	3.56	" 57 A	.08	" 99	9.18	" 137	7.50	" 7	15.07	E.F.L 1	22.15		
" 22..	1.71	" 58	6.42	" 100	1.25	" 138	11.90	" 8	1.50	" 2	9.21		
" 23..	.31	" 59	5.82	" 101	16.91	" 139	.96	" 9	11.86	" 3	6.78		
" 24..	3.55	" 62	16.65	" 102	1.48	" 140	12.65	" 12 A	3.59	" 4	15.97		
" 26..	2.74	" 65	9.03	" 103	9.98	" 141	2.77	" 14 A	4.02	" 5	15.70		
" 26 A	.24	" 66	1.64	" 104	8.50	" 142	10.48	" 15	.50	" 6	8.50		
" 27..	11.24	" 68	3.21	" 105	7.40	" 143	6.11	" 17	4.50	" 7	12.09		
" 28..	1.27	" 69	6.66	" 106	6.10	" 145	20.50	" 20	1.34	" 8	11.06		
" 29..	1.50	" 71	10.93	" 107	6.44	" 146	6.81	" 21	14.34	" 9	11.73		

"E" estimated

Total 1,270.92 miles

Size of Telephone Wire used on Telephone Lines

COMPLETED OCT. 31, 1916–OCT. 31, 1917

Section No.	Mileage	Gauge	Section No.	Mileage	Gauge
		No.			
L.T. 135.....	7.73	9 B.W.G. Iron			
" 145.....	20.50	9 " "			
" 157.....	10.82	9 " "			
" 163.....	.52	10 C.C. Steel			
" 165.....	8.10	9 B.W.G. Iron			
" 172.....	1.42	9 " "			
" 173.....	8.88	9 " "			
" 174.....	9.60	9 " "			
E.F.L. 6.....	8.50	9 " "			
" 15.....	6.25	9 " "			
" 16.....	7.25	9 " "			
C.O.S. 1607a.....	7.91	10 C.C. Steel			
Total.....	97.48	.....	Total.....	.....	.....

Size of Telephone Wire used on Telephone Lines

UNDER CONSTRUCTION OCT. 31, 1917

Section No.	Mileage	Gauge	Section No.	Mileage	Gauge
		No.			
L.T. 164.....	E 22.50	9 B.W.G. Iron.			
" 179.....	3.11	9 " "			
S.L. 24.....	E 4.00	9 " "			
" 25.....	E 4.50	9 " "			
" 26.....	E 6.25	9 " "			
C.O.S. 1723, E-1B.	30.53	10 C.C. Steel			
C.O.L. 50	26.50	9 B.W.G. Iron			
Total.....	97.39	.....	Total	.....	.....

"E" estimated

Gauge, Length and Weight of Copper Clad Steel and Galvanized Iron Wire

TELEPHONE LINES

Gauge	Wire Miles			Weight in Pounds			Single Circuit Mileage			
	Completed to Oct. 31st, 1916	Completed Oct. 31st, 1916 to Oct. 31st, 1917	Under construction to Oct. 31st, 1917	Completed to Oct. 31st, 1916	Completed Oct. 31st, 1916 to Oct. 31st, 1917	Under construction to Oct. 31st, 1917	Completed to Oct. 31st, 1916	Completed Oct. 31st, 1916 to Oct. 31st, 1917	Under construction Oct. 31st, 1917	Completed and under construction to Oct. 31st, 1917
No. 8 B. & S., C.C. steel	207.52	.....	207.52	50,842	.....	.....	103.76	.....	.....	103.76
No. 10 " "	928.98	16.86	1,006.90	145,529	26,706	96,719	464.49	8.43	30.53	503.45
No. 9 B.W.G., iron	832.74	178.10	1,144.56	253,984	105,969	79,563	416.37	89.05	66.86	572.28
No. 10 " "	283.32	.....	283.32	70,580	.....	.....	141.66	.....	.....	141.66
Totals...	2,252.56	194.96	2,642.30	520,935	132,675	176,282	1126.28	97.48	97.39	1,321.15

SECTION III

OPERATION OF THE SYSTEMS

NIAGARA SYSTEM

Continued expansion characterized the operation of the Niagara System for the year 1917.

The increasing power requirements of the existing war munitions industries, and the addition of others, together with the normal yearly growth of the municipalities' demands, severely taxed the available generator capacity at Niagara Falls. However, up to the end of October, the Commission was enabled to meet its obligations, with a few exceptions.

On November 7th, the Commission's source of power supply was augmented by arrangements with the Canadian-Niagara Power Company, whereby the output of one 10,000 h.p. generator was paralleled with two generators already in operation on the Niagara Transformer Station bus. On December 17th, a fourth generator of the same capacity was added, and on July 4th, by a regrouping of the generators at the company's plant which supply power to the Commission, one more unit was placed at the Commission's disposal, making in all 50,000 horsepower.

While the power supplied from this company was at times reduced on account of generator failures and ice trouble, the service was quite satisfactory under normal operating conditions.

On August 1st, the operation of the generating plant, transformer stations, transmission lines and sub-stations of the Ontario Power Company was placed under the supervision of the Commission, in the interests of the Ontario Power Company, and while to date no radical change has been made in the method of operation, the resulting combination promises innumerable advantages with regard to improved service and increased economy in operation and maintenance. Several changes in the physical arrangement of the plant are well under way. One purpose of these changes is to permit of direct voltage regulation from the generating station, which will fulfill a long felt want. These changes will also increase the facilities for sectionalizing trouble.

The Niagara System was visited with electrical storms on sixty-three different days during the summer. On thirteen occasions, storms were reported over practically the entire system, of which seven were severe and the balance mostly moderate. Particularly violent disturbances were reported from Niagara Falls, while very severe concentrations occurred in St. Mary's, London, St. Thomas and Chatham districts. Only one total system high-tension interruption occurred, which could be directly attributed to lightning discharges.

The performance of the transmission high-tension lines was particularly gratifying during the past year. The line conductors required little or no attention, and inspections made from time to time confirmed the belief that the cable now in operation should not be the subject of concern relative to the reliability of the service. No failures of high-tension line insulators occurred during the year, and the results of the periodic megger tests of the dielectric strength of the units shews little or no deterioration in the strings erected during the last four years.

Some very interesting comparative figures from an engineering standpoint have been obtained from the tests of the various makes of insulators erected.

As the abnormal condition of the metal market rendered the purchase of line conductors for the new tower line between Dundas and Toronto injudicious for the present, and as an unusually large increase in the load supplied to Toronto munition plants and to the Imperial Ministry of Munitions and to other plants in the vicinity of New Toronto was anticipated, the Commission decided that for the welfare of the service the cross-section of the conductor forming the two No. 3/0 aluminum circuits on the old tower line should be increased. Accordingly, preparations were made to take down the old cable for re-fabrication at the factory, and the erection of No. 6/0 steel reinforced aluminum. A considerable portion of the extra aluminum required was obtained from scrap on hand, and some by replacing the aluminum conductor on other lines with iron wire, where the conductivity of those lines was considered greater than necessary for the present. On account of the high price of aluminum, the transfer proved decidedly economical, without any impairment of the service.

The restringing of the old tower line was commenced on May 20th and was practically completed in the month of October. The cost of the work indicates that financially it was very advantageously undertaken.

While the restringing of the section was being proceeded with, the operating features of this line were improved by the erection of a wooden structure at the Cooksville high-tension station. On this structure are mounted disconnecting switches, by means of which one circuit may now be switched to the other, or either line opened for sectionalizing purposes; also permitting the Cooksville high-tension station to be fed directly from either of the high-tension lines at this point. Other construction work completed by the line maintenance gangs outside of their regular duties follow.

The four telephone circuits on the wood pole line paralleling the old tower line between Niagara Falls and Dundas to a point just north of the Welland Canal to Niagara Falls, were transferred to the wood pole line which parallels the new tower line.

The No. 3/0 aluminum cable on the high-tension section between Kitchener and Stratford high-tension stations was replaced in the spring with 7 strand No. 9 steel cable. This change was proceeded with after a rather extensive investigation of the properties of the steel cable for the transmission of electrical energy. The mechanical performance of the new conductor was very satisfactory.

The 13,200 volt feeder between the Guelph high-tension station and the Fergus and Elora taps was double circuited by the erection of a circuit of No. 3/0 aluminum cable. An air-break switch and structure was erected at the corner of York road and Victoria streets in the municipality of Guelph, for the purpose of forming a break-down connection between the Guelph 13,200-volt system and the Fergus and Elora tap line, for emergency use.

The Commission purchased and took over the Interurban Power Company, and the Erindale Power Company's properties on January 11th, and proceeded to change the method of feeding the former customers of these companies to a more economical basis. The 13,200-volt No. 0 copper circuit, between the Interurban Company's Mavety street station in Toronto Junction, and the Ontario National Brick Company's plant, was removed and placed in stock. The No. 0 aluminum cable between the Mavety street station and the Erindale powerhouse was also removed, and the aluminum cable used for the restringing of high-tension Section

B. The brick company was temporarily fed from the Cooksville high-tension station on February 11th, from a connection to the feeder supplying the Mimico and Port Credit distributing stations, and later on, from a new circuit running north from the Cooksville high-tension station and then west on Dundas street to the company's yards. The customers of the Interurban Power Company of Etobicoke Township, formerly fed from the company's sub-station in New Toronto, were finally supplied with power from the Niagara System on July 31st.

A three-phase circuit of No. 0 aluminum was strung from the switching structure No. 290, at the Village of Beachville, to the new distribution station erected a little to the west of the village. The No. 1/0 aluminum circuit between Beachville and Embro was replaced with ¼-inch stranded steel conductor. By reason of the high market value of aluminum, the capital cost of this section was decreased by over twice the cost of the new conductor, plus erection.

The No. 3/0 aluminum conductor on the 4,000-volt circuit between the villages of Tilbury and Comber was replaced with 5/16-inch steel cable. In this case, the original capital expenditure was reduced nearly three times the cost of the steel conductor, plus erection.

The 13,000-volt circuits of the Baden distributing station were rearranged, and two air break disconnecting switches erected to accommodate the new feeder to the Village of Wellesley.

Extensions made to several of the high-tension and smaller distributing stations relieved the somewhat overloaded condition of the latter part of 1916, which permitted the station maintenance department to internally inspect and thoroughly overhaul the electrical and mechanical apparatus to provide against the anticipated increase in load during the coming winter. Failures of the station equipment were quite insignificant, and no difficulty was experienced in effecting repairs. As in the past years, several transfers of equipment from one station to another were carried out, where unexpected power demands developed.

The meter inspection department designed and erected pole-type, out-door metering equipment to measure the power supplied to the villages of Springfield and Burgessville, Zurich, Dashwood and Otterville, and indoor equipment at the Tillsonburg and Norwich municipal stations, to obtain a graphic record of the load of the rural customers from these stations. During the year a large amount of work was accomplished in connection with the tests and adjustments of meters and protective equipment in operation on the local distribution systems.

During the summer an engineer of this department made a thorough investigation of the methods of power measurement and service protecting devices, employed by some of the largest electrical corporations in the United States under actual working conditions. Where comparison is possible, it was found that the methods in use on the Commission systems are not excelled.

The tables given below shew the load demand of the various municipalities, as well as the increase during the year. The plotted curve on another page shows the monthly peak load taken by the Commission from the supply sources, from October, 1910, to October, 1917. If no shortage of generating capacity had occurred at Niagara Falls, the gradient of increase for the past year would have been very much greater.

Municipality	Load in H.P. Oct., 1916	Load in H.P. Oct., 1917	Increase in H.P.
Toronto	38,465	50,167	11,702
Dundas	548	597	49
Hamilton	8,562	11,622	3,060
Waterdown	71	65	.....
Caledonia	55	53.6	.....
Hagersville	97.8	99	1.2
London	7,359	8,552.5	1,193.5
Thorndale	22.8	22.8	.....
Thamesford	26.5	20.1	.....
Guelph	2,549.5	3,075	525.5
Ontario Agricultural College	160	146.7	.....
Military Hospitals Commission	203.5	182.3	.....
Rockwood	11.9	12.3	.4
Georgetown	300	348.3	48.3
Acton	70.3	192	121.7
Preston	1,149	1,150	1
Galt	2,285.5	2,466.5	181
Hespeler	450.4	338	.....
Breslau	30	30	.....
Kitchener	3,262	4,280	1,018
Waterloo	815	862	47
Elmira	109.9	134	24.1
New Hamburg	76.4	162.2	85.8
Baden	196.5	153	.....
Stratford	1,448	1,519	71
Mitchell	148.8	175.6	26.8
Seaforth	387.4	536	148.6
Clinton	101.8	106	4.2
Goderich	214.5	264.6	50.1
St. Mary's	434.3	396.7	.....
Woodstock	1,170	1,331	161
Ingersoll	792	858	66
Tillsonburg	242.6	296	53.4
Norwich	171.6	252.6	81
Beachville	96.5	167.6	71.1
St. Thomas	2,011	2,037.5	26.5
Port Stanley	75	70.4	4.6
Brantford	1,783	2,536	753
Paris	398	356.5	.....
Port Credit	59.6	67	7.4
Weston	197	754	557
Brampton	658.8	933	276.2
Milton	355	334	.....
Mimico	156.1	184	27.9
Mimico Asylum	31.5	30.8	.....
Provincial Brick Yard	136	128.7	.....
New Toronto	291	1,509.5	1,218.5
Toronto Township	99.1	45	.....
Cooksville Dixie	22.7	30	7.3
Windsor	1,502.6	1,852	349.4
Walkerville	1,576.5	1,972	395.7
Elora	77.7	130.3	52.6
Fergus	92.5	82.8	.....
Welland	5,626	4,283	.....
St. Catharines	2,433	4,520	2,087
Port Dalhousie	79	87.1	8.1
Strathroy	203.7	291.6	87.9
Drumbo	10.9	14.8	3.9
Plattsville	57.6	60.3	2.7
Woodbridge	76.4	86.6	10.2
Ayr	36.2	43	6.8
Princeton	10.4	10.3	.....
Embro	28.1	27.3	.....
Chatham	509.4	888.7	379.3

Municipality	Load in H.P. Oct., 1916	Load in H.P. Oct., 1917	Increase in H.P.
Lucan	30.2	142	111.8
Bolton	95.2	96.5	1.3
Mt. Brydges	26.8	25.7	.....
Wallaceburg	277.5	419.5	142
Delaware	8.9	8	.....
Tilbury	63	66.3	3.3
Simcoe	103.2	131.4	28.2
Waterford	97.8	105.6	7.8
Lambeth	17.9	18.5	.6
Grantham Township	17.4	10.1	.....
Dresden	68.3	70.6	2.3
Dorchester	16	14.7	.....
Comber	21.4	20	.....
Burford	31.5	32.7	1.2
Bothwell	28.1	62.5	34.4
St. George	38.2	30.1	.....
Dutton	44.9	44.5	.....
Thamesville	45	42.2	.....
Blenheim	77.7	81.7	4
Lynden	79.7	83.7	4
Ailsa Craig	16	80.4	64.4
Otterville	11.7	13.4	1.7
Exeter	77.7	123.3	45.6
Granton	12.4	41.3	28.9
Niagara Falls	2,364.5	2,304	.....
Petrolia	14.6	284	138
Wyoming	22.7	28	5.3
Ridgetown	91.1	136.3	45.2
Milverton	33.5	189	155.5
Listowel	117.9	184.5	66.6
Palmerston	93	88.5	.....
Harriston	52.9	98	45.1
Tavistock	28	220	192
Wellesley	13.4	114.6	101.2
Burgessville	8	35	27

A list of the municipalities connected during the year 1917.

Municipality	Date connected	Initial Load in H.P.	Load in H.P. Oct., 1917	Increase in H.P.
St. Jacobs	Aug. 28, 1917	72.4	72.4	.....
Stamford Township	Nov. 5, 1916	387.5	454.4	66.9
Sarnia	Nov. 10, 1916	268	1,126	858
Highgate	Nov. 6, 1916	13.6	18.7	5.1
Forest	Feb. 7, 1917	56.3	69.3	13
Watford	Aug. 11, 1917	49.6	49.6	.....
Dublin	Sept. 25, 1917	7.5	7.5	.....
Rodney	Jan. 15, 1917	24	31	7
West Lorne	Dec. 22, 1916	21.4	25.5	4.1
Etobicoke Township	July 31, 1917	85.8	97.8	12
Hensall	Dec. 21, 1916	37.5	26.8	.....
Dashwood	Aug. 24, 1917	35	35	.....
Zurich	Aug. 24, 1917	14.7	55	40.3
Springfield	July 7, 1917	20.4	21.4	1

Niagara System

Capital Investment of the Niagara System in operation at October 31, 1917:

Right-of-Way	$1,115,779 81
Steel Tower Transmission Lines	3,317,432 39
Telephone Lines	129,706 69
Relay System Lines	54,537 32
Wood Pole Lines	2,077,156 36
Transformer Stations, including conduit system (Ontario Power Co. to Niagara Station)	3,286,967 30
Distributing Stations	267,547 07
Total Operating Capital	$10,249,126 94

Total Expenditures in connection with the Operation and Maintenance of Niagara System for the fiscal year 1916-17:

Operators' Salaries and Expenses, including supplies		$105,955 64
Maintenance of Steel Tower Lines		81,241 81
" Telephone and Relay Lines		9,549 12
" Low Tension Lines		55,074 17
" Transformer Stations		73,533 60
" Distributing Stations		23,135 77
Administration		58,922 02
		$407,412 13
Interest on Invested Capital	$432,540 73	
Cost of Power at Niagara Falls	1,310,713 95	
		$1,743,254 68

Summary of Financial Statement of the Niagara System Operation for the fiscal year 1916-17:

Receipts

Power delivered, including charges for Administration, General Expense, Operation, Maintenance and Interest	$2,637,606 31

Disbursements

Power purchased, including losses in Transmission and Transformation, Administration, General Expense, Operation, Maintenance and Interest	2,150,666 81
Surplus applicable to Sinking Fund and Depreciation Reserve Account	$486,939 50

SEVERN SYSTEM

The power demand of the municipalities served from the Severn System increased 53 per cent. over that supplied during the year 1916. Parallel operation of the generating stations at the Big Chute, Eugenia and Wasdell's Falls enabled the Commisssion to meet the increased demand and to provide first-class service with regard to character and continuity.

No serious failures of equipment occurred in the generating station or transformer stations from lightning discharges or other causes. The transmission lines were carefully gone over during the summer and the spans sags adjusted, poles straightened and backfilled where necessary.

Negotiations were completed for the purchase from the Orillia Water and Light Commission of the seven and one-half miles of 22,000-volt single, three-phase circuit of No. 2 aluminum conductor extending from the Big Chute plant to a point approximately south of the Orillia Commission's new hydraulic power house, at Swift Rapids. From this point a circuit of No. 3/0 aluminum cable will be erected to the Swift Rapids plant, a distance of five-eighths of a mile. This tap will form the permanent connection between the Big Chute and Swift Rapids plants, thereby completing the link between the Severn and the Wasdell's System by the use of the Orillia Commission's lines as per arrangements by contract.

To facilitate operation and maintenance the switching structure at the point where the Victoria Harbor tap line branches from the trunk lines was remodelled and the single pole disconnecting switches were replaced with two-pole switches in order that the Victoria Harbor tap might be switched to either of the trunk lines at the junction point.

Another improvement of this nature was effected by the erection of two horn-gap, air-break switches in the two main 22,000-volt lines near the Village of Elmvale for sectionalizing purposes. Two three-phase disconnecting switches were erected on the System switching structure at Waubaushene, so that the local distributing station could be served from either of the main lines at this point. A three-phase, air-break line disconnecting switch was erected on a pole structure outside of the Victoria Harbor sub-station to act as an incoming line switch at this station.

The extra right-of-way purchased along the transmission line between the Port McNicoll Junction and the Canadian Pacific Railway elevator was cleared of trees.

Switching and transformer equipment was installed at the Big Chute power house, and a small 2,200-volt distribution system was erected to supply the Department of Railways and Canals with power and light for the marine railway installed at the Big Chute plant. This system was put into commercial operation about the middle of October, 1917.

In the latter part of August the service from the original Midland station was discontinued, and resumed from the new distributing station erected adjacent to the municipality's waterworks station.

The two pole line entrance structure at the Collingwood distribution station was remodelled so as to accommodate double circuit lines from the Severn and single circuit lines from the Eugenia Systems, and also the outgoing 2,200-volt distributing circuits.

Severn System

Municipality.	Load in H.P. 1916	Load in H.P. Oct., 1917	Increase in H.P.
Midland	815	1080.5	265.5
Penetang	495	435.6	.....
Collingwood	888.7	1986	1097.3
Barrie	541.5	487.2	.....
Coldwater	34.8	36.8	2
Elmvale	36.2	47	.8
Stayner	56.3	54	.....
Creemore	38.8	47	8.2
Orillia	1414	2111	697
Waubaushene	16.8	22.7	5.9
Port McNicoll	19.3	34	4.7
Victoria Harbor	26.8	28.4	1.6
Camp Borden	325.7	323	.....
C. P. R. Elevator	1176.6	1160.1	.....

Severn System

Operating Statement, Fiscal Year 1916-17.

Capital Investment as at October 31, 1917:

Big Chute Power Development, including Generating and Transformer Station	$350,713 28
Transmission Lines	348,520 12
Distributing Stations	82,861 13
Total Operating Capital	$782,094 53

Total Expenditures in connection with the Operation and Maintenance of the Severn System for the fiscal year 1916-17:

Operators' and Patrolmen's Salaries and Expenses, and proportion of Administration and General Office Expense	$31,041 21
Cost of Power purchased from Wasdell's and Eugenia Systems	58,917 45
Interest on Capital Investment	32,364 54
	$122,323 20

Summary of Financial Statement of the Severn System Operation for the fiscal year 1916-17:

Receipts

Power delivered, including charges for Administration, General Expense, Operation, Maintenance and Interest	$172,792 75

Disbursements

Power purchased, including losses in Transmission and Transformation, Administration, General Expense, Operation, Maintenance and Interest	122,323 20
Surplus applicable to Sinking Fund and Depreciation Reserve Account	$50,469 55

EUGENIA SYSTEM

The second year's operation of the Eugenia System was successfully concluded on November 18, 1917, with very bright prospects for the future. The quality of service supplied was exceptionally good, the operating characteristics of the equipment in the generating and transformer stations meeting the manufacturer's guarantees very satisfactorily.

The Eugenia generating station continued to assist the Big Chute plant to supply the increased demand of the municipalities of the Severn System with any surplus capacity not required by the municipalities of the Eugenia System. The average credit in horsepower to the Eugenia System in this respect was 1,635.

The Grand Valley distributing station was made alive December 1st. This station is fed over a 22,000-volt No. 6 copper circuit from a tap off the feeder to Orangeville at Laurel Junction. The villages of Grand Valley and Arthur are served from this station with 4,000-volt power. The new distributing stations at Orangeville and Shelburne were placed in operation on February 11th and November 26th respectively. Service was formerly supplied to these customers from the old sub-stations taken over with the Pine River System.

The comparatively new transmission lines of this system were gone over carefully and the span sags adjusted and the poles backfilled and tree trimming done by the line maintenance department where necessary.

The out-going 22,000-volt lines on the pole structure at the power house were removed to conform with some alterations which were made in the high-tension equipment of the station to properly control the tie line from the Eugenia to the Severn System. To benefit operation and maintenance of the south and west portions of the system the telephone line between the power house and the Village of Flesherton was double circuited by the erection of another circuit of No. 9 iron wire. This allows for a separate telephone circuit for the south and the west parts of the system.

Flashboards were installed on the dam to give additional storage and a motor boat was purchased for maintenance use on the storage basin. Plans have been prepared for a suitable barn to be erected near the power house to properly accommodate the transportation equipment in use at this point. Considerable lumber on the Commission's property is available for this work. A water supply was provided for the operators' cottages by piping to a boxed spring on the escarpment. The approach to the power house from the south was refilled and put in good condition.

Eugenia System

Municipality	Load in H.P. 1916	Load in H.P. Oct., 1917	Increase in H.P.
Owen Sound	992	978.5	.....
Flesherton	36.2	33.5	.....
Dundalk	50.2	75.3	25.1
Durham	63.9	60.3	.....
Mount Forest	98.5	106.2	7.7
Chatsworth	25.4	15.2	.....
Markdale	60	73	13
Holstein	6.9	6.4	.....
Chesley	80.4	90	9.6
Shelburne	51.2	94.7	43.5
Orangeville	128.7	94.5	.....
Horning's Mills	5	4.7	.....

Municipalities connected during the year 1917.

Municipality.	Date connected.	Initial Load in H.P.	Load in H.P. 1917	Increase in H.P.
Grand Valley	Dec. 1, 1916.....	20	41.5	21.5
Arthur	Dec. 1, 1916.....	25	41	16

Eugenia System

Operating Statement, Fiscal Year 1916-17.

Capital Investment as at October 31, 1917:

Eugenia Falls Power Development and Generating Plant	$646,856 32
Distributing Stations	72,857 09
Transmission Lines	470,718 72
Total Operating Capital	$1,190,432 13

Total Expenditures in connection with the Operation and Maintenance of the Eugenia System for the fiscal year 1916-17:

Operators' and Patrolmen's Salaries and Expenses, and proportion of Administration and General Office Expense	$25,473 35
Interest on Capital Investment	55,762 04
	$81,235 39

Summary of Financial Statement of the Eugenia System Operation for the fiscal year 1916-17:

Receipts

Power delivered, including charges for Administration, General Expense, Operation, Maintenance and Interest	113,169 89

Disbursements

Operation, Maintenance, Administration, General Office Expense and Interest	81,235 39
Surplus applicable to Sinking Fund and Depreciation Reserve Account	$31,934 50

WASDELL'S SYSTEM

The operation of the Wasdell's Station during the past year was attended with good results. The increase of the municipalities' load, while not large, compared very favorably with that of corporations of the same population on the other systems.

The surplus capacity of the generating station was constantly required on the Severn System. Reports show that the system is in excellent operating condition, with no indication of excessive depreciation.

At the power house an addition was made to the switchboard to provide metering and protective equipment on the tie line between the power house and the Severn System. Several minor improvements were carried out by the operators at the power house, such as painting the floors, iron work, etc. A telephone booth

was erected and the telephone equipment installed to conform with the standard employed on the other systems. A three-phase horn-gap air-break, 22,000-volt disconnecting switch was erected in the Beaverton tap, near the junction, for sectionalizing purposes.

A small barn was erected at the power house to house the transportation equipment; also a small building to serve as a machine shop for maintenance repairs. Further storage space for stock was obtained by laying a floor over a part of the gate house.

Wasdell's System

Municipality.	Load in H.P. Oct., 1916	Load in H.P. Oct., 1917	Increase in H.P.
Beaverton	56.3	60.3	4
Brechin	36.2	53.6	17.4
Cannington	57.6	68.4	10.8
Sunderland	52.2	41.5	.....
Woodville	48.2	51.2	3

Wasdell's System

Operating Statement, Fiscal Year 1916-17.

Capital Investment as at October 31, 1917:

Wasdell Power Development and Generating Plant	$139,912 96
Distributing Stations	14,519 90
Transmission Lines	110,298 41
Total Operating Capital	$264,731 27

Total Expenditures in connection with the Operation and Maintenance of the Wasdell System for the fiscal year 1916-17:

Operators' and Patrolmen's Salaries and Expenses, and proportion of Administration and General Office Expense	$7,372 03
Interest on Capital Investment	11,085 45
	$18,457 48

Summary of Financial Statement of the Wasdell System Operation for the fiscal year 1916-17:

Receipts

Power delivered, including charges for Administration, General Expense, Operation, Maintenance and Interest	$28,008 48

Disbursements

Operation Maintenance, Administration, General Office Expense and Interest	18,457 48
Surplus applicable to Sinking Fund and Depreciation Reserve Account	$9,551 00

CENTRAL ONTARIO SYSTEM

During the past year the load on the Central Ontario System has steadily increased until in October it reached the highest peak in the history of its operation.

Extremely favourable river flow continued on the Trent River, enabling all loads to be carried without difficulty. Practically no serious interruptions occurred during the year. Probably the worst interruption was on April 6th, which was due to a snow and sleet storm, which so heavily loaded the wires that a large number of breaks were made, and service was disorganized to all towns at any distance from the generating plants.

Fortunately this trouble occurred on Good Friday, so that factories depending on the Commission's service did not suffer to any great extent.

A number of extensions have been made in the Commission's plants at various places, more particularly in the nature of refinement and improvements to the system, to enable the increasing difficulties of operation under war conditions to be met.

Power Generated

Month	1916 Peak Load H.P.	1917 Peak Load H.P.	Increase H.P.
November	17,800	20,800	300
December	18,150	21,700	3,550
January	16,150	21,500	5,350
February	13,720	18,600	4,880
March	13,750	19,320	5,570
April	12,630	17,500	4,870
May	12,620	17,400	4,780
June	15,330	17,210	1,880
July	15,580	18,200	2,620
August	15,820	20,200	4,380
September	16,480	21,500	5,020
October	18,570	24,440	5,870

Load Report

Municipality	Load in H.P. October, 1916	Load in H.P. October, 1917	Increase H.P.
Bowmanville	1,247	1,140	107*
Belleville	1,434	1,513	79
Brighton	72	90	18
Cobourg	502	522	20
Colborne	75	80	5
Deseronto	302	355	53
Lindsay	1,062	1,540	478
Millbrook	38	31	7*
Napanee	315	275	40*
Newcastle	20	24	4
Newburgh and Camden East	.....	295	295
Oshawa	1,568	1,815	247
Orono	20	24	4
Peterboro	3,067	4,020	953
Port Hope	375	435	60
Stirling	75	80	5
Trenton	670	4,800	4,130
Tweed	87	127	40
Whitby	217	260	43

*Decrease.

MUSKOKA SYSTEM

During the second year's operation of the Muskoka System, the Commission was able to improve the service supplied its customers very materially by further improvements of the equipment in the generating station.

It was deemed advisable to completely re-wind the armature of the old 450-K.V.A. generator formerly in operation at the power house. A gate house was erected and repairs and alterations were made to the gate and stop log operating mechanism. The necessary transformers, heaters and wire were purchased and installed for the purpose of heating the gate house.

The section of the 6,600-volt line to Gravenhurst between the power house and limits of Muskoka Falls village was remodelled and a lighting system, for the power house roadway, pipe lines and dam was erected on the poles of this feeder from the power house to the gate house. This work also included alterations to the distribution system for the village.

Two sets of line disconnecting switches were installed at Bracebridge and Utterson in the 22,000-volt line from the power house to Huntsville, for sectionalizing purposes. The line maintenance gang did considerable tree trimming and made all necessary line adjustments.

Muskoka System

Municipality	Load in H.P. Oct., 1916	Load in H.P. Oct., 1917	Increase in H.P.
Gravenhurst	235	321.7	86.7
Huntsville	580	597.8	17.8

Muskoka System

Operating Statement, Fiscal Year 1916-17.

Capital Investment as at October 31, 1917:	
South Falls Power Development and Generating Plant	$127,106 43
Distributing Station	8,916 35
Transmission Line	53,203 77
Total Operating Capital	$189,226 55
Total Expenditures in connection with the Operation and Maintenance of the Muskoka System for the fiscal year 1916-17:	
Operators' and Patrolmen's Salaries and Expenses, and proportion of Administration and General Office Expenses	8,383 03
Interest on Capital Investment	8,368 67
	$16,751 70
Summary of Financial Statement of the Muskoka Operation for the fiscal year 1916-17:	
Receipts	
Power delivered, including charges for Administration, General Expense, Operation, Maintenance and Interest	$19,815 27
Disbursements	
Operation, Maintenance, Administration, General Office Expense and Interest	16,751 70
Surplus applicable to Sinking Fund and Depreciation Reserve Account	$3,063 57

ST. LAWRENCE SYSTEM

The operation of the St. Lawrence System was attended with very satisfactory progress. The municipal power demands show material increases. Parallel operation of the Municipal steam plant at Brockville with the M. F. Beach Company's hydraulic plant at Iroquois was continued throughout the year with good results. The Commission has proceeded with arrangements for the supply of a sufficient quantity of power to meet the requirements of the system for some years to come.

The transformer stations and the transmission lines required no special maintenance during the year. One of the Pittsburgh Company's 26,400-volt, 250-K.V.A. transformers which was taken over from the New York and Ontario Power Company in a damaged condition, when the sub-station at Iroquois was purchased, was rebuilt and placed in operation.

St. Lawrence System

Municipality.	Load in H.P. Oct., 1916	Load in H.P. Oct., 1916	Increase in H.P.
Brockville	348.5	368.5	20
Prescott	217	191.3	.....
Winchester	58.9	69.7	10.8
Chesterville	48.2	87.8	39.6
Williamsburg	17.4	21	3.6

St. Lawrence System

Operating Statement, Fiscal Year 1916-17.

Capital Investment as at October 31, 1917:

Distributing Stations	$30,009 96
Transmission Lines	147,612 62
Total Operating Capital	$177,622 58

Total Expenditures in connection with the Operation and Maintenance of the St. Lawrence System for the fiscal year 1916-17:

Operators' and Patrolmen's Salaries and Expenses, including Operating Supplies, and proportion of Administration and General Office Expense	$2,437 79
Interest on Capital Investment	7,570 47
Cost of Power purchased	6,101 90
	$16,110 16

Summary of Financial Statement of the St. Lawrence System Operation for the fiscal year 1916-17:

Receipts

Power delivered, including charges for Administration, General Office Expense, Operation, Maintenance and Interest	$20,712 44

Disbursements

Power purchased, Operation, Maintenance, Administration, General Office Expense and Interest	16,110 16
Surplus applicable to Sinking Fund and Depreciation Reserve Account	$4,602 28

OTTAWA SYSTEM

The total load taken by the Hydro-Electric System of Ottawa for the past year shows an increase of 607 horse-power over that of the year 1916, and very satisfactory progress is reported. The power supplied by the Ottawa and Hull Power and Manufacturing Company was of unusual merit with regard to operating features.

The power supplied to the municipality under the temporary contract, since June, 1916, for the operation of the Queen street pumping station will be discontinued very shortly, when the new pumping station at Lemieux Island is placed in service. This station is now ready for test and will be put into regular operation in the middle of November and will require approximately 1,700 horse-power. The new pumping station is fed direct from the power company's generating station *via* submarine cable at 11,000 volts.

In order to supply the additional power required by the waterworks department, the Commission has placed an order with the Power Company under the original contract, for three blocks of 500 horse-power each, making a total on order of 6,500 horse-power. The Power Company has accepted the Commission's order and has agreed to the cancellation of the temporary contract for the Queen street pumping station power supply, this contract to automatically expire on the date that the Lemieux Island plant is placed in regular operation.

The Commission has completed arrangements for the installation of the necessary metering equipment at the Power Company's generating station to provide totalizing graphic records of the power delivered to the municipal electric department and to the new waterworks station and also to provide a separate record of the load taken by the latter station.

PORT ARTHUR SYSTEM

The past year's operation of the Port Arthur System was very satisfactory. The recovery of industrial undertakings and business expansion has shown a marked effect on the power demand, with the result that the Commission will find it necessary to provide several additional blocks of power from the Kaministiquia Power Company to cope with the situation in the coming winter. From a recent survey of the industrial prospects in this vicinity it is estimated that the peak load demand of the City of Port Arthur will approximate 10,000 horse-power within the next few years.

The Commission received first-class service from the Kaministiquia Power Company during the year and the joint operation of the Commission's system with the municipality's Current River station was carried out very successfully.

During the year the Commission proceeded with the erection of a wood-pole entrance and switching structure for the purpose of sectionalizing the two 22,000-volt outgoing lines to the grain elevators and to the waterworks station, thereby greatly benefiting the operating facilities of the high-tension portion of the system.

Port Arthur System

OPERATING STATEMENT, FISCAL YEAR 1916-17.

Capital Investment as at October 31, 1917:

Transmission Lines	$88,118 72
Transformer Stations	21,319 45
Total Operating Capital	$109,438 17

Total Expenditures in connection with the Operation and Maintenance of the Port Arthur System for the fiscal year 1916-17:

Operators' Salaries and Expenses, including Operating Supplies, and proportion of Administration and General Office Expense	$6,691 30
Interest on Capital Investment	6,012 19
Cost of Power	38,487 63
	$51,191 12

Summary of Financial Statement of the Port Arthur System Operation for the fiscal year 1916-17:

Receipts

Power delivered, including charges for Administration, General Expense, Operation, Maintenance and Interest	$56,468 28

Disbursements

Power purchased, Operation, Maintenance, Administration, General Office Expense and Interest	51,191 12
Surplus applicable to Sinking Fund and Depreciation Reserve Account	$5,277 16

TOTAL CAPITAL INVESTMENT TO OCTOBER 31, 1917

Following is a statement of expenditures on Capital Account, including Niagara, Severn, St. Lawrence, Wasdell, Eugenia, Muskoka, Port Arthur, Renfrew, Ottawa, Central Ontario, and Ontario Power Co. Systems, Central Construction Rural, Miscellaneous Power Development, Farms Account, Stock on Hand, Tools and Equipment, Municipal Construction.

Niagara System

Transmission Lines Operating:		
Right-of-Way	$1,115,779 81	
Steel Tower Lines	3,317,432 39	
Telephone Lines	129,706 69	
Relay System Lines	54,537 32	
Wood Pole Lines	2,077,156 36	
		$6,694,612 57
Transmission Lines, in course of construction:		
Right-of-Way (Dundas-Toronto)	$208,545 04	
Steel Tower Lines	480,167 90	
Telephone Line (Section A)	2,970 82	
Wood Pole Lines	200,170 19	
		891,853 95
Rural Line Construction	$481,013 85	
		481,013 85
Transformer Stations:		
Stations Operating	$2,994,107 55	
Conduit System (Ontario Power Co. to Niagara Station)	292,859 75	
Stations and Extensions to same, in course of construction	297,868 48	
		3,584,835 78
Distributing Stations Operating	$267,547 07	
Distributing Stations in course of construction	89,979 80	
		357,526 87
Chippawa Development	$2,376,688 25	
		2,376,688 25
		$14,386,531 27

Severn System

Big Chute Power Development, including Generating and Transformer Stations	$350,713 28	
Big Chute Power Development Extensions in course of construction	10,791 77	
		$361,505 05
Transmission Lines	$348,520 12	
Transmission Lines in course of construction	59,294 15	
		407,814 27
Distributing Stations	$82,861 13	
Distributing Stations in course of construction	15,790 91	
		98,652 04
		$867,971 36

Eugenia System

Power Development, including Generating and Transformer Station	$646,856 32	
Power Development Extension, in course of construction	11,496 63	
		$658,352 95
Transmission Lines	$470,718 72	
Transmission Lines, in course of construction	31,940 81	
		502,659 53
Distributing Stations	$72,857 09	
Distributing Stations, in course of construction	37,866 54	
		110,723 63
		$1,271,736 11

Wasdell's System

Power Development, including Generating and Transformer Station	$139,912 96	
Transmission Lines	110,298 41	
Distributing Stations	14,519 90	
		$264,731 27

Muskoka System

South Falls Power Development, including Generating and Transformer Station	$127,106 43	
		$127,106 43
Transmission Lines	$53,203 77	
Transmission Lines Extension, in course of construction	1,013 25	
		54,217 02
Distributing Stations		8,916 35
		$190,239 80

St. Lawrence System

Transmission Lines	$147,612 62	
Transmission Lines, in course of construction	19,805 52	
		$167,418 14
Distributing Stations	$30,009 96	
Distributing Stations, in course of construction	3,882 17	
		33,892 13
Revenue (Renewals Reserve Shortage)		5,924 03
		$207,234 30

Ottawa System

Meter Equipment	$432 39	
		$432 39

Port Arthur System

Transmission Lines	$88,118 72	
Transformer Stations	21,319 45	
		$109,438 17

Renfrew System

Round Lake Storage Dam	$20,389 43	
		$20,389 43

Central Ontario System

Power Development	$4,012,560 56	
Power Development Extension, in course of construction	60,020 66	
		$4,072,581 22
Transmission Lines	$998,848 22	
Transmission Lines, in course of construction	302,557 87	
		1,301,406 09
Transformer Stations	$830,322 73	
Transformer Stations, in course of construction	9,384 27	
		839,707 00
Stores, Tools and Equipment		109,850 90
General Sales		66,987 98
Local Systems Capital Expenditure		3,114,716 30
		$9,505,249 49

Ontario Power Company

Capital Stock	$7,984,000 00	
Current Account	12,617 42	
		$7,996,617 42

General Accounts

Municipal Construction Work repayable	$413,911 04	
Sales to Municipalities	221,523 52	
Bonnechere District Operating Charges	3,701 25	
		$639,135 81

General Accounts (Capitalized)

Office Furniture, Equipment, Stationery, etc.	$80,380 28	
Office Furniture and Equipment, Electrical Inspection Department	3,172 46	
Service Buildings (Storehouses, Laboratory, Garage, Machine Shop, etc.)	250,741 00	
Automobiles and Trucks (depreciated value)	114,179 63	
Administrative Office Building	467,264 16	
Electrical Railway Projects	28,345 45	
Central Rural Line Construction	10,421 39	
Power Development, Monteith District	1,333 00	
Farms Account	1,164 44	
		$957,001 81

Stores, Tools and Equipment

Stores on hand for Construction Purposes and Sale to Municipalities	$453,615 86	
Line Maintenance Stock for all Systems	64,354 29	
		$517,970 15
Operating Departments, Testing and Metering Equipment for all Systems	$4,053 71	
Line and Station Construction Tools and Equipment	5,579 00	
Line and Station Maintenance Tools	8,572 67	
Hydraulic Construction Tools	2,011 01	
First Aid Outfits	79 40	
		$20,295 79
Laboratory Operation (incomplete production orders)	$431 95	
		$431 95
Ontario Government (Sinking Fund)	$221,494 47	
		$221,494 47
Grand Total		$37,176,900 99

PROVINCIAL EXPENDITURES

Fiscal Year 1916-17

Engineering assistance to non-operating municipalities for the gathering of data throughout the Province for statistical purposes; reports on Municipal Operation	$23,839 57	
Municipal estimates for power supply, non-operating Municipalities, and also rate investigations	1,801 88	
Hydrographic surveys, storage surveys, reports and investigations on power sites and stream flow for the Province	41,926 58	
Engineering investigations, surveys and reports on proposed Municipal Electric Railways	37,909 76	
Demonstration at Rural and Urban Fairs	2,045 60	
Administration and general office expenses	11,746 23	
	$119,269 62	
Less:		
Credits:—For engineering services in connection with preliminary survey for the Niagara System High Tension Lines and Stations, office furniture and equipment, together with interest accrued to October 31, 1917, charged to Province former years, but now capitalized in Commission's books	$61,933 15	
		$57,336 47
Electrical Inspection—Balance of operating expenses for the year, exclusive of capital investment, such as furniture, typewriters, etc., which is carried forward		39,771 48
Special Hydrographic Investigations—Grand River and Lake of the Woods Districts; Reports on Crown Leases, etc., for the Department of Lands and Mines; also inspection of power at Niagara Falls		7,746 21
Expenditures on account of Hydraulic Equipment		1,372 65
		$106,226 81

BALANCE SHEET

OCTOBER 31, 1917

Assets

Sundry Expenditures, per list	$37,176,900 99	
Warrantable Advances	69,510 83	
Unpaid Power Bills, October 31, 1916	451,890 47	
Unpaid Rural Power Bills, October 31, 1916	37,319 53	
Cash on hand	68,651 33	
		$37,804,273 15

Liabilities

Provincial Treasurer	$17,002,720 91	
" " Central Ontario System	9,900,000 00	
" " Niagara Power Development	1,200,000 00	
Debentures, Ontario Power Co.	7,784,000 00	
" Gravenhurst	45,789 00	
" Streetsville	5,427 97	
Interest	119,553 58	
		$36,257,491 46

Systems Reserves Applicable to Sinking Fund and Renewals:

Niagara System	$1,050,536 15	
Severn "	98,072 76	
Wasdell "	15,035 09	
St. Lawrence System	14,864 78	
Port Arthur "	28,069 56	
Eugenia "	18,582 07	
Muskoka "	2,151 31	
Central Ontario System Surplus	212,744 60	
		$1,440,056 32

Service Buildings Reserves applicable to Sinking Fund and Renewals:

Storehouse	$70,561 76	
Laboratory	6,433 77	
Machine Shop	6,610 51	
Garage	720 57	
Administration Building	9,482 67	
		93,809 28

Rural Reserves	$8,863 01	
Insurance Fund	3,792 23	
Balance on Cable Reel Account	260 85	
		12,916 09
		$37,804,273 15

SECTION IV

CONSTRUCTION WORK OF THE COMMISSION

NIAGARA SYSTEM

NIAGARA POWER DEVELOPMENT

During 1917 considerable progress has been made in connection with the Chippawa-Queenston development. At the end of 1916 the location of the intake works, canal and power house had been outlined in general form. Options had been obtained and purchase made of a portion of the lands required for right-of-way purposes. Arrangements had also been completed for some of the plant required in the execution of the work. Extensive surveys had also been prosecuted, both in connection with the location of the works and the securing of the necessary properties.

Surveys

During the year just completed, surveys were continued, the final location of most of the work staked on the ground. A number of difficult and complicated land surveys were also made, and engineering parties were placed in residency on those divisions upon which construction work was about to commence.

The centre line of the canal was reinforced with concrete monuments and the line established by precise methods. Check levels, connecting the headworks with the power house, were also run.

A large number of deep well borings were made to establish the profile of the surface of the rock which underlies the earth formation along the greater portion of the district traversed by the canal.

Daily gauge readings of the Niagara River have been taken continuously at Chippawa, Queenston and the power house site during the year.

Construction Railway

For the purpose of constructing the canal and power house and as a means of disposing of excavated material and handling the large amount of construction material and plant required on the work, provision has been made for a double-track, standard gauge, electrically operated railway, which will parallel the line of the canal and extend also to the main disposal site located on the edge of the escarpment at St. Davids. Sidings, yards and loading tracks are provided for at various points.

When it was decided to electrify the eleven-mile double-track construction railway being built at this time in connection with the new Niagara Power Development, the detailed work of choosing satisfactory sub-station equipment, locomotives and designing a suitable type of overhead trolley wire was taken up.

A contract was made with the Canadian General Electric Company for the supply of six 500-k.w. rotary converters, complete with transformers and switching equipment for two sub-stations. Four of the six equipments are insulated for

1,500-volts so that they could be used on the proposed interurban lines if the opportunity offers. The delivery of this equipment is not all that was desired, and the cost is very high when compared with figures for similar equipment purchased before the war. An attempt was made to secure second-hand equipment and to better the delivery and price, but although many plants were investigated, some as far south as the State of Alabama, still it was found impossible to secure satisfactory equipment in this way.

It was found impossible to secure prompt delivery of electric locomotives, as the usual practice of the two large electrical companies in Canada is to purchase them from allied companies in the United States, and the factories there are congested with war work. The Commission prepared designs and finally awarded the contract for twelve bodies and trucks for 60-ton locomotives to the C. E. A. Carr Company, which is having them built at the National Steel Car Company in Hamilton. Six second-hand lots of motors and control apparatus were also secured. These are now being installed on the first locomotives. A contract was given the Canadian Westinghouse Company for the remaining six locomotive equipments, which are also being built for service on the proposed 1,500-volt lines. It was felt that it would be easier to dispose of these locomotives at the completion of the work if they were built to operate on a 1,500-volt system, and in case they are not required on the proposed interurban system.

This installation is probably the largest construction work of its kind ever undertaken by electric power, and it was necessary to deviate from standard electric railway practice in many ways, the most noticeable of which is undoubtedly in the overhead trolley work. It is the intention to have locomotive cranes and other similar equipment moving up and down the track continually, and it was therefore absolutely necessary to keep the overhead wire at one side of the track or else use third-rail construction. The former method was decided upon. This, of course, required special collectors on the locomotives. This is being taken care of by mounting four trolleys on the operating cab, each provided with poles formed in such a way that the wheels will run on a wire seven feet on either side of the centre line of track.

Offices and Utilities

With the idea of centralizing the administration as much as possible, a general office building was erected on the line of the canal to serve as executive headquarters. Nearby is located a dressing station, equipped with all modern appliances, and a large garage for motor transport services.

A complete system of telephone communication has been installed, making use of the Bell system and a local system for inter-departmental calls.

The Commission has purchased a sand-pit for the supplying of sand and gravel necessary for the manufacture of concrete.

Construction

The past season was mainly devoted to the assembling of equipment for excavation, and the building of about fifty structures of a more or less temporary character, including bunk-houses, boarding-camps, sub-stations, powder houses, cement sheds, water tanks, and a central air compressor and electrical distributing station.

A subsidiary site for the disposal of excavation was developed during the summer at the Whirlpool Gorge. Track to the extent of six miles was constructed and ballasted, about one-half of this amount being laid in the main line and one-half in storage yards.

The main storehouse, woodworking, machine, and blacksmith shops, engine house, coal and lumber storage are all located in one yard near the centre of operations and at a point most convenient to the various railways. The yards contain car storage, sorting and unloading tracks and are connected by inter-switching transfers with the Grand Trunk and Michigan Central Railroads.

A few tracks were laid in the vicinity of the location of the forebay to serve the crusher plant and sand storage, and to facilitate the handling of machinery and building material required in the construction of the power house.

A pole line for the distribution of electric power over the whole work has been completed and placed in operation. This line extends from the intake works at Chippawa along the line of the canal to the power house. It also carries the telephone service wires, in addition to the lines used for the distribution of power.

Overhead construction work has been commenced on the construction railway.

Work has also been commenced on the construction of the rock crushing plant for supplying material for concrete ingredients and track ballast, and partial excavation has been made for storage stock piles for the crushed rock and sand.

Permanent Construction

All permanent construction work done to date has been performed in the Whirlpool section.

Two steam shovels have been operating in the canal prism at this point since May 1917. These machines were also used in taking out excavation for the construction railway.

A start was also made on the construction of the concrete bridge to carry the Niagara, St. Catharines and Toronto Railway tracks over our canal.

In all, 170,000 cubic yards of excavation were removed and disposed of in connection with the construction work accomplished during the year.

Generating Station

Additional discussions were carried on with representatives of different electrical manufacturing companies regarding generators, transformers and oil-switches. Preliminary designs of generators and transformers have been submitted and are being carefully considered. Schemes of connections are also being drawn up for consideration.

Montrose Sub-Station

Instructions were received to construct a sub-station near Montrose to furnish power for the construction work on the Niagara Power Development canal.

The equipment will consist of two incoming 12,000-volt lines, an oil switch and protective equipment on each line; two 3-phase, 1,500-kv-a., 25-cycle, 46,000/26,400/13,200/4,000/2,300/575-volt transformers; and switching equipment for six 4,000-volt feeders and three 200-kv-a., 25-cycle, 2,300/575-volt transformers, to supply air compressor motors.

There will also be installed two 500-k.w. 600-volt rotary converters with their transformers and the necessary switching equipment.

The incoming line oil switches and the 4,000-volt oil-switches were purchased from the Canadian Westinghouse Company. The 1,500-kv-a. transformers, the 12,000-volt lightning arresters and the switchboard panels for the 4,000-volt circuits were purchased from Canadian General Electric Company. Weston indicating meters were purchased from A. H. Winter Joyner, Limited. The 200-kv-a. transformers were purchased from the Moloney Electric Company. The rotary converters with their transformers and switching equipment were purchased by the Commission from the Canadian General Electric Company.

Provision will be made for two additional 1,500-kv-a. transformers, three more 200-kv-a. transformers and for two additional rotary converters. All installation work will be done by the Commission.

Whirlpool Sub-Station

Instructions were received to construct a sub-station north of Niagara Falls, Ontario, to furnish power for the construction work on the Niagara Power Development canal.

The equipment will consist of two incoming 12,000-volt lines, with an oil switch and protective equipment on each line; three 3-phase, 1,500-kv-a., 25-cycle, 46,000/26,400/13,200/4,000/2,300/575-volt transformers; switching equipment for six 4,000-volt feeders; and six 200-kv-a., 25-cycle, 2,300/575-volt transformers to supply air compressor motors.

There will also be installed four 500-k.w. 600-volt rotary converters, with their transformer and necessary switching equipment.

The incoming line oil switches and the 4,000-volt oil switches were purchased from the Canadian Westinghouse Company; the 1,500-kv-a. transformers and the 12,000-volt lightning arresters from the Canadian General Electric Company; the Weston indicating meters from A. H. Winter Joyner, Limited; the switchboard panels for 4,000-volt feeders from Northern Electric Company; the 200-kv-a. transformers from the Moloney Electric Company, Limited; the rotary converters with their transformers and switching equipment from the Canadian General Electric Company.

The installation work of the above equipment will be done by the Commission. The building, which is of semi-permanent construction, will be erected as part of the air-compressor station.

Forebay Sub-Station

Instructions covering purchase of three 200-kv-a., single-phase, 25-cycle, 2,300/575-volt transformers for an outdoor sub-station, near the proposed forebay, were received. The order for three such transformers was awarded to Moloney Electric Company, Limited.

STATION CONSTRUCTION

General

Cooling Water Supply for Sub-Station Transformers

An extended study has recently been made looking to improvements in the water supply for the cooling of transformers in the various stations along the 110,000-volt steel tower line. Originally either a well was driven, water was collected in an excavation in the basement, or some such small system was arranged, and has been adequate until recently. Latterly, loads have increased so that it is necessary to give the matter attention and provide adequate cooling water and some reserve system for cooling of these transformers. Work during this year has been undertaken, among others, at Brant, Dundas, Kent, Kitchener and Preston stations. In some cases adequate supplies have been obtained by means of artesian wells, and in others a reserve supply has been secured by making connections to the domestic supply from the municipality which is supplied with power from the substation.

As it is desired to limit the breathing of transformers by sudden and excessive changes of temperature of oil, etc., due to change of load, an examination has been been made of the application of automatic features to pumping or valve equipment so as to control the amount of cooling water supplied to the transformers in such a way that a greater quantity of water will be supplied as the load on the transformers increases.

Ontario Power Company Generating and Transformer Station

At the end of July, an inspection of the generating and transformer station of the Ontario Power Company was made, and conferences held with the engineers of this company regarding additional feeders to the Commission's Niagara Falls Transformer Station.

Hamilton Garage and Storehouse

To provide garage and storage facilities for the maintenance force at Hamilton, a building located at the corner of York and Napier streets in Hamilton was rented by the Commission, and the necessary repairs and alterations to the structure were authorized in August and completed the following month.

NIAGARA FALLS TRANSFORMER STATION

Building Extension

Brief reference is made in the last Report to an extension to this building being constructed by Messrs. Wells & Gray, to provide facilities for handling larger transformers and for increased accommodation.

The extension is constructed to conform to the type of work on the original building, and contains three floors over the section not required as an erection room and repair shop, and has a basement under its entire area.

Sections of the building were partitioned off as offices, and space was provided on the second floor for maintenance stores. Work in connection with the construction, with the exception of pouring of the basement floor, which has been held up for electrical considerations, was completed early in the year.

In addition to this work, it was found necessary to provide additional supports for transformer banks where larger transformers were being installed. This work was carried out in consecutive order as installation of larger transformers demanded.

Additional Transformer Equipment

No. 8 Bank of transformers, consisting of three 7,500-kv-a., 110,000-volt units was placed in service on May 4, 1917. Contracts for three additional banks of the same rating were placed on January 31, 1917, and February 9th with the Canadian Westinghouse Company, the first bank to be placed in service about December 1st and the other two are expected to be placed in service during 1918. One of the present banks of three 3,500-kv-a., 110,000-volt transformers will be moved to a new location in No. 4 pocket, and reconnected for 46,000-volt operation. No. 3 bank of 46,000-volt transformers was placed in service on October 26, 1917. These changes will give a total transformer capacity at Niagara Station of 181,000-kv-a., including two spare 3,500-kv-a. units, one each for 46,000 and 110,000-volt service.

Switching Equipment

A new 12,000-volt bus structure has been built under contract with Messrs. Wells & Gray, of Toronto, and placed in service to take care of the four feeders from the Canadian Niagara Power Company, and also for controlling the 46,000-volt transformers. In this way the 46,000-volt load can be operated from its own 12,000-volt bus and set of feeders and, if necessary, entirely separated from the 110,000-volt system. The switching equipment for this new bus was purchased on contract from the Canadian Westinghouse Company and has been installed. Necessary temporary changes have been made in the switchboard to handle this additional equipment, and the installation of a new complete station switchboard is under consideration.

Necessary oil switches of an improved type, and other necessary switching equipment, have been purchased from the Canadian Westinghouse Company to increase the capacity of the outgoing 110,000-volt lines and also to ensure better service.

New designs for switch structures for Feeders No. 1, 2 and 3, from the Ontario Power Company's plant have been made to take care of a newer type of 12,000-volt oil switches, which are being purchased on contract from the Canadian Westinghouse Company. The construction of this work will be finished in the early part of 1918.

Eight 1,600-ampere, 12,000-volt and eight 800-empere, 12,000-volt, type "C" reactance oil switches were ordered on April 7, 1917, on contract with the Canadian Westinghouse Company. These switches are intended for future feeders, and delivery is to be made during the summer of 1918.

Protection of Service

After a careful study of the application of current-limiting reactors to the 12,000-volt bus to limit the effect of short-circuits, tenders were obtained and contracts were awarded to Metropolitan Engineering Company, Toronto, for six 2,000-ampere, 12,000-volt power limiting reactors, and to the Canadian General Electric Company for three reactors of the same rating. Orders were placed with

the Philadelphia Electric Company and the Canadian Westinghouse Company for necessary switching equipment for these reactors. Contract for the necessary concrete bus structure for this equipment was let to Messrs. Wells & Gray, of Toronto, and part of it has already been constructed. The reactors should be ready for shipment by the end of December 1917.

This work includes the installation of cables so as to form a ring-bus. It is expected to have this work completed in the early part of 1918.

12,000-volt Feeders

The cable system from the Canadian Niagara Power Company's plant, as described in the last Report, is now practically completed. The first feeder was put into temporary service about December 16, 1916. Due to adverse weather conditions this work has not been completed in all details, but will be finished about January 31, 1918. All four feeders, however, are in service; two of them on temporary connections.

A blanket order was placed with the Standard Underground Cable Company of Canada, Hamilton, for 40,000 feet of 350,000-c.m., three-conductor, stranded copper sector-shaped, lead-covered and steel-tape-armored, 12,000-volt cable on April 13, 1917. This cable is intended for additional feeders to the Ontario Power Company's plant, and for other future work.

Work was started on No. 12 feeder to Ontario Power Company, which consists of four 350,000-c.m. lead-covered armored cables and which was supplied by the Standard Underground Cable Company of Canada, on the above blanket order. This feeder will be ready to be placed into service about December 1, 1917.

Plans were finished for reinforcing No. 1 cable system from the Ontario Power Company, covering the addition of one cable to each of the existing feeders, excepting No. 1 feeder, which will be changed over to four 350,000-c.m. cables. This work will be finished early in 1918.

When the above work is finished there will be sufficient cable capacity to meet the added transformer capacity of this station, with a spare feeder in reserve.

Studies are being made in connection with the rearrangement of the incoming feeders so as to obtain improved conditions.

Water and Oil Systems

No. 3 sprinkling tank, referred to in last Report, was placed in service on June 15, 1917. New water supply headers and discharge-headers were installed, with each transformer connected so that it can be supplied with cooling water by any of the three pumps from any one of the three tanks. Plans are being prepared for the installation of a circulating pump between No. 2 and No. 3 sprinkling tanks, so as to make the cooling system more efficient during summer months. All the oil and water piping for the 46,000-volt transformers was moved to a new location back of the transformers. This change was necessitated because the space originally occupied by the piping was needed to accommodate the switching equipment.

An 8,000-gallon oil tank has been ordered and is being installed outside the station. This is to take care of the new 7,500-kv-a. transformer units.

Mechanical Equipment

A 65-ton transfer truck was ordered from the Northern Crane Works, Walkerville, to facilitate the moving of the new 7,500-kv-a. transformers. An 8-ton

chain-block was also purchased for handling the reactors and for general use around the station.

Storehouse

A galvanized iron storehouse, 80 by 30 feet, was constructed immediately east of the Transformer Station to store material used in construction and maintenance work.

General

A bunk house was designed and is being constructed to the east of the Niagara Station for the use of the military guard. Plans are being developed for a proposed extension to the Transformer Station, to take care of a double bus on the 110,000-volt system. Plans for the installation of new neutral resistance are also under consideration.

DUNDAS TRANSFORMER STATION

Reconstruction

The contract for reconstruction of the section of this building which was destroyed by fire, was placed with Messrs. Wells and Gray, of Toronto, and reconstruction to replace original work was started November 1916, and completed early in the spring.

The section of the building which was destroyed was originally constructed by Messrs. Wells & Gray as an extension to the original building in 1913, and was 91 feet long by 45 feet wide by 46 feet 9 inches high, from basement floor to top of parapet wall.

Structural steel, with the exception of some sections which were not damaged by the fire, was ordered as an exact duplicate of the original steel, and was supplied by the Hamilton Bridge Works Company, from the company's original details.

Other work done at this station during the year includes changes to control room in the original building.

The work in connection with repairs to the electrical equipment damaged by the fire was taken care of by the Commission and assistance was given on the factory inspection of some of the repaired apparatus.

New Line Oil Switches

To provide an improved type of oil switch with greater capacity on the four 110,000-volt lines from Niagara Falls, it was decided to replace the original switches, which had been repaired after the fire, with 400-amp. round tank, reactance type "GA," 110,000-volt oil switches, which were being manufactured on contract with Canadian Westinghouse Company for the Niagara Falls Transformer Station, it having been decided to use resistance type oil switches at Niagara Falls. These reactance type switches are nearing completion at the factory and plans are under consideration covering their installation in Dundas Transformer Station.

Increased Transformer Capacity

Owing to the increasing load on this station larger transformers were necessary, and the decision was made in July to transfer three 2,500-kv-a. units from Toronto Transformer Station to Dundas Transformer Station as quickly as they could be released, and to house them in a temporary extension to the existing building. For this purpose a type "K-15," 110,000-volt Canadian General Electric oil switch, ordered on a stock order, was allotted to this station and this has been delivered.

Before the above-mentioned extension was started the plans were altered and decision made to take seven 2,500-kv-a. units from the Toronto Transformer Station instead of three, and to install six of them in the space occupied by the six existing 1,250-kv-a. units, and also to postpone the construction of the extension to the building until further consideration had been given to the question of additional 13,200-volt and 110,000-volt switching equipment for more lines.

Arrangements were made for the moving of the 2,500-kv-a. transformers to Dundas and for the removal of the 1,250-kv-a. units from service, and plans are being prepared to cover the changes in the station.

Cooling Water Supply

Tenders have been received and contract forms arranged for a well about 12 feet internal diameter with concrete walls carried to grade at a point about 25 feet from the south-west corner of the station. The preliminary work, i.e., the excavation to water about 8 feet below grade, has been made.

TORONTO TRANSFORMER STATION

No. 5 Transformer Bank

On June 17th two Canadian General Electric 5,000-kv-a., 63,500-volt high tension, 13,200-volt low tension, 25-cycle, oil-insulated, water-cooled, single-phase transformers, together with the 110,000-volt and 13,200-volt switching equipment for connecting the transformers to the existing busses, were placed in service as part of No. 5 bank, with the spare 2,500-kv-a. transformer forming the third transformer of this bank. On August 19th the third 5,000-kv-a. transformer was placed in service in this bank in place of the above 2,500-kv-a. transformer, making a total capacity of 15,000-kv-a. for this No. 5 bank.

Changes to Transformer Banks No. 3 and No. 4

The contract was placed with the Canadian General Electric Company on January 10th for the necessary 13,200-volt switching equipment and connecting material to change or replace the existing equipment, in order to give sufficient capacity to control the six 5,000-kv-a. transformers referred to in last report as having been ordered for No. 3 and No. 4 banks.

Changes to Transformer Banks No. 1 and No. 2

On February 6th a contract was placed with the Canadian General Electric Company for six 5,000-kv-a., 63,500-volt high tension, 13,200-volt low tension, 25-cycle, oil-insulated, water-cooled, single-phase, transformers. These transformers will be used to replace the existing 2,500-kv-a. transformers in banks No. 1 and No. 2. When these are installed the total capacity of this station will be 75,000-kv-a. A contract was also placed with the Canadian General Electric Company for the necessary 13,200-volt switching equipment and connecting material to change or replace the existing equipment, in order to give sufficient capacity to control these 5,000-kv-a. transformers.

It was decided to install in transformer pockets No. 1 and No. 2 the 5,000-kv-a. transformers which were purchased for pockets No. 3 and No. 4. For transformer bank No. 1 the changes in switching equipment were completed and the first 2,500-kv-a. transformer was replaced on October 18, 1917. The changes will be completed early in November, thus increasing the capacity of this No. 1 bank from 7,500-kv-a. to 15,000-kv-a. The 2,500-kv-a. units will be transferred to Dundas Transformer Station.

In order to accommodate the north transformer in this No. 1 bank, it was necessary to remove the brick wall between this No. 1 bank and the erection room. Arrangements are being made to replace the upper part of this wall with a heavy screen, in order to avoid possible contact between equipment or workmen in the erection room with the high tension and low tension connections for this transformer bank. In order to accommodate the north transformer in bank No. 2 it will also be necessary to remove part of the wall between No. 1 bank and No. 2 bank. A few minor changes in the connections of the oil and water piping to the 5,000-kv-a. transformers were necessary, and same were carried out by Messrs. Sheppard and Abbott, Toronto.

1917 Extension for High Tension Line Switch

On July 25th a contract was placed with Messrs. Witchall & Son, for the construction of an extension on the south end of the building. This extension is 20 feet, 2 inches wide by 18 feet, 9 inches long by 20 feet 8 inches high, inside dimensions, and is made of pressed brick with a concrete foundation to match the present building. Messrs. Witchall & Son supplied all the building material for this extension excepting the structural steel, which was supplied by Messrs. McGregor & McIntyre, Limited. The portion of the transformer station wall which forms the north side of this extension was removed, and a door placed in west wall of lobby as an entrance to this extension. This work is now completed excepting for the concrete bases for the 110,000-volt oil switch. This extension is for the purpose of housing one type "K-15," 110,000-volt oil circuit-breaker, together with the necessary disconnecting switches and line entrances for one 110,000-volt line into this station. This line will be connected through choke coils to one of the present incoming lines. The oil switch, together with its bushing type current transformers, was supplied from a stock order, for which the contract had been placed with Canadian General Electric Company some months previous. The necessary insulators were supplied by the Ohio Brass Company from a stock order which had been previously placed with this firm, while disconnecting switch blades and jaws were supplied by the Canadian Westinghouse Company for mounting on the Ohio Brass Company's insulators by fittings which were supplied by the Commission. The oil switch is now delivered at Toronto Station and the insulators and disconnecting switches are expected during November.

Arrangements are also being made to install disconnecting switches in the 110,000-volt bus between transformer banks No. 4 and No. 5, and between banks No. 2 and No. 3. In order to make these disconnecting switches accessible for operation, an operating platform ten feet high will be installed.

Increased Carrying Capacity of Incoming Lines

To take care of the increased line currents when all the transformers which are on contract for this station are installed, arrangements are being made to supply 400-amp. current carrying parts to replace the existing 200-amp. parts for the Westinghouse type "GA" 110,000-volt oil switches and for all the General Electric 110,000-volt disconnecting switches.

Mechanical Equipment

Owing to the increased weights of the 5,000-kv-a. transformers, it became necessary to strengthen the supports under the crane in the erection room. This work was undertaken by Messrs. McGregor & McIntyre, of Toronto, and completed in December 1916.

The new transformer truck mentioned in last Report was received and used during installation of the larger transformers.

Synchronous Condenser Installation.

On October 6th authorization was given by the Commission for the purchase and installation of synchronous condensers of a total capacity of 8,000-kv-a. Negotiations are proceeding for the purchase of two 4,000-kv-a. units, which it is proposed to install in a separate building to be erected adjacent to the present transformer station, also for the auxiliary equipment necessary for their operation.

PRESTON TRANSFORMER STATION

1916 Extension

The contract for the construction of the extension to the present building referred to in the last Report was awarded to Messrs. John Hayman & Sons, of London, in November 1916, the contract for the steel work being awarded to the Dominion Bridge Company. The building was completed in June 1917. The extension is 34 feet by 56 feet by 36 feet high and matches the original building.

By partitioning off the old service room and putting in a second floor, a control-room and wash-room were made on the main floor, and a service-transformer-room and battery-room on the second floor.

Plans for the required changes in the electrical equipment were completed, provision being made for two 110,000-volt banks of 750-kv-a., single-phase transformers with switching equipment; one 4,000-volt and seven 13,200-volt outgoing feeders and one spare 13,200-volt feeder; also one service transformer feeder. All oil switches are to be electrically controlled from the main switchboard.

The high tension switching equipment for the second bank of transformers, and part of the 13,200-volt equipment is being transferred from Stratford Transformer Station. The 13,200-volt feeder switches will be transferred from Niagara Transformer Station as soon as released from service there. The remaining switching equipment was purchased from the Canadian General Electric Company and Canadian Westinghouse Company.

Four 750-kv-a., 63,500/13,200-volt, single-phase transformers were transferred from Stratford Transformer Station to this station and three of these were placed in service temporarily at 6,600-volts, as a second bank directly in parallel with the first bank on December 24, 1916, the fourth one being a spare to replace one of the original transformers which was transferred to Kitchener Transformer Station. Three 75-kv-a., 13,200/575-volt single-phase Packard Electric Company transformers transferred from Baden Distributing Station, will be used as service transformers, feeding three 7½-kv-a., 550/110-volt, single-phase lighting transformers and station-heating and power circuits. Three 20-kv-a., 13,200/2,200-volt, single-phase Canadian General Electric Company transformers which were transferred from Breslau Distributing Station to a temporary location at Preston Transformer Station on May 6, 1917, to supply a 4,000-volt feeder to Breslau, will eventually be placed in the service-transformer-room mentioned above. A 60-cell "E9" Tudor storage battery and 7-kw., 125-volt, d.c. motor generator set for charging the battery, were purchased from the Canadian General Electric Company, and will supply the necessary current for switch-control-circuits.

All installation work on the switching equipment will be done by the Commission. This work is not yet completed, as it was delayed by pressure of work in other stations, and on account of inability to obtain prompt delivery of equipment ordered.

Cooling Water Supply

By drilling an 8-inch hole approximately 130 feet deep, a flowing well has been secured for this station. This well has been connected to the existing circulating pumps in the basement.

KITCHENER TRANSFORMER STATION

Cooling Water Supply

A well about 26 feet from the north wall of the station has been drilled to a depth of about 160 feet. A motor operated deep well pump will be placed in a sub-grade pump house directly over the well. The motor in this case is wound rotor type. At full load speed the pump will have a capacity of 97 Imperial g.p.m. It is the intention to automatically control the speed by means of a thermostat immersed in the transformer oil. The pump and motor have been ordered and the automatic control apparatus is being investigated. An emergency connection to the city mains has been laid out and tenders for the work have been secured.

STRATFORD TRANSFORMER STATION

Early in this year the four 750-kv-a., 63,500/13,200-volt transformers were transferred from this station to Preston Transformer Station, and arrangements are now being made to also remove the 110,000-volt switching equipment for this bank of transformers to Preston Transformer Station for use there.

In order to have all feeders out of this station operate at 26,400-volts, as referred to in the last Report, it was necessary to supply new service transformers. For this purpose a contract was placed with the Canadian General Electric Company on June 29th for two 75-kv-a., 26,400 or 13,200-volt delta high tension, 4,000-volt star or 2,300 or 575-volt low tension, 25-cycle, oil-insulated, self-cooled, 3-phase, outdoor type transformers. Shipment of these transformers was promised for the end of October. These transformers are to be connected for 575-volts on the low tension from which the electric heating circuits for the station will be taken, and three 5-kw., 550/110-volt service transformers will be used for the lighting, water pumps, etc. Arrangements are being made to install one additional 26,400-volt feeder in this station. At present all the oil switches in this station are hand operated, and plans are now under consideration for the electric operation of all the existing 26,400-volt and 110,000-volt oil switches, and also the moving of the existing switchboard to the service room. It is expected that this station will be changed over to 26,400-volts on the outgoing feeders early in 1918.

ST. THOMAS TRANSFORMER STATION

Railway Equipment

The observation of the operation of the 1,500-volt direct current rotary converters was continued. To afford additional protection, two direct current electrolytic lighting arresters were purchased from Canadian General Electric Company and connected directly across the commutators of the two 500-k.w. rotary converters.

Owing to the load carried by the rotary converters at this station, it was deemed necessary to add a third unit, and plans were prepared showing this additional equipment. One Canadian Westinghouse Company 500-k.w., 1,500-volt direct current rotary converter with a bank of three 185-kv-a., 13,200/920-volt transformers and switching equipment in the Horton street Sub-station of London

Public Utilities Commission were purchased from the London Utilities Commission and removed to St. Thomas Station, being installed there as unit No. 3. The necessary additional switching equipment was purchased from the Canadian Westinghouse Company. The removal of apparatus from London and the erection and installation of it, with the other equipment was done by the Commission. This No. 3 unit was put in service on June 27, 1917.

Additional Feeder Equipment

The installation of the two additional 13,200-volt feeders mentioned in the last year's Report, has not yet been entirely completed, owing to part of the equipment ordered being temporarily used for some more urgent work.

Rotary Converters

The Canadian Westinghouse Company 500-k.w., 1,500-volt rotary converter No. 2, with its switching equipment, three 185-kv-a., 13,200-volt high tension, 920-volt low tension, 25-cycle, single-phase, transformers, and one 1,500-volt electrolytic arrester were purchased from the London Public Utilities Commission and removed by the Commission to the St. Thomas Transformer Station in June.

COOKSVILLE TRANSFORMER STATION

The Commission has purchased from the Toronto Hydro-Electric System a 25-60-cycle frequency changer set of 1,000-kv-a. rating, 12,500-volts, 3-phase, 300 revolutions perminute, built by the Lancashire Dynamo and Motor Company, formerly in operation in a sub-station at Mavety street, Toronto. This machine was dismantled and removed to Cooksville Transformer Station, and is being installed in a corrugated sheet steel annex 33 feet by 28 feet in size.

The set consists of the 1,000-kv-a., 25-cycle and 60-cycle synchronous machines, an exciter and a 2,200-volt starting induction motor, all directly mounted upon the same shaft.

The switchboard, switching and metering equipment, which was originally installed with this set in West Toronto in 1913, was built by the Ferranti Electric Company and was removed to Cooksville also.

The three 50-kv-a., 13,200/2,200-volt Siemen's transformers were transferred from the old Beachville Distributing Station and are being installed in the annex to supply the starting motor.

Power is to be taken from a 13,200-volt, 60-cycle line from the former Erindale Power Company's station, now owned by the Commission, and fed into Niagara System at 25-cycles through this set to the Cooksville Transformer Station 13,200-volt bus.

When not being used as a frequency changer, the 25-cycle end of the machine may be used as a synchronous condenser, on the Niagara System for power factor correction.

The erection of the annex and the installation work on the electrical equipment is being done by the Commission.

BRANT TRANSFORMER STATION

It was decided to remodel the existing 26,400-volt oil switches in this station by putting on heavier tanks, and orders for the necessary parts were placed in March and April with the Canadian Westinghouse Company. Further consideration of the oil switches in this station led to the decision to change them to elec-

trical operation and to install a storage battery and charging set for this purpose. The necessary parts for electrical operation of the 26,400-volt and 110,000-volt switches were ordered from the Canadian Westinghouse Company in April and June. An Edison storage battery type "G-6" was ordered in June from the Edison Storage Battery Company. The 10-k.w., 125-volt direct current generator directly connected to a 15-h.p., 220-volt induction motor, was ordered from the Canadian Crocker-Wheeler Company in August.

Plans are now being prepared for the necessary switchboard for the battery and also for adding differential relay protection to the 1,250-kv-a., 63,500/26,400-volt transformers.

The extension for a second 110,000-volt line, referred to in the last Report, has been postponed.

Cooling Water Supply

The old reciprocating pump has been removed and has been replaced by a motor operated deep well pump rated at 27 Imperial g.p.m. The matter of increasing the water supply is receiving attention.

KENT TRANSFORMER STATION

Cooling Water Supply

It was decided to discard the compressed air method of supplying water to the cooling pond and to install a 3-h.p. motor driven deep well pump having a capacity of 27 Imperial g.p.m. in a subgrade pump house adjacent to the eastern wall of the station. An emergency connection has also been made to the city main in front of the station. The piping has been interconnected so that the centrifugal pumps can pump either from the cooling pond or the city mains and the deep well pump can pump from the deep well to the transformers or to the cooling pond.

YORK TRANSFORMER STATION

A site was procured on Church street, a short distance north of Mimico, for the erection of this station.

A number of studies were made up on the electrical layout and preliminary building plans prepared. The designs are now being prepared.

The preliminary plans provide for two incoming 110,000-volt lines, two banks of 5,000-kv-a. transformers and six outgoing 26,400-volt or 13,200-volt feeders. Provision is also being made for low tension service transformers and several local 2,300-volt feeders. All oil switches will be electrically operated and controlled from the main switchboard.

MUNICIPAL WORK

During the year engineering assistance in connection with extensions to systems and operation difficulties was given to the following municipalities:—

Bothwell, Blenheim, Burford, Caledonia, Comber, Dresden, Hagersville, Lynden, Pt. Dalhousie, Simcoe, Ridgetown, Thamesville, Tilbury, Waterford, Wyoming, Ayr, Brampton, Drumbo, Dutton, Elmira, Elora, Fergus, Goderich, Harriston, Milverton, Mitchell, New Hamburg, Plattsville, Seaforth, St. George, Thamesford, West Lorne, Woodstock.

Ailsa Craig

The annual report of auditor shows the municipality's local electric distribution system to be in substantial condition. Two farmers are also served from the 4,000-volt feeder.

A contract was secured with the local flour and chopping mill for a 75 h.p. motor, and engineering assistance given in regard to the extensions to serve new customers and also regarding operation.

Aylmer

With reference to the delivery of 4,000-volt power to the municipality at $39 per horse-power per annum, and of the cost of a new distribution system to receive the power, estimates were prepared and submitted to the Water and Light Commission.

Distributing Station

Arrangements having been made to supply the Aylmer Water & Light Commission with power, plans were prepared and material ordered for the sub-station.

In the present waterworks and generating station of the municipality, a bank of 13,200/23,000-volt, single-phase transformers connected delta-star and a switchboard panel will be installed, and switching and metering equipment, all of Siemen's manufacture, is being transferred from the old Beachville distributing station and will be installed here.

In addition a 4,000-volt feeder will supply the municipality of Springfield. For this service a panel, switching and metering equipment is on order from the Canadian Westinghouse Company.

All installation work will be done by the Commission.

Street Lighting

For the new street lighting system which is now being installed in this municipality, the Commission recommended the use of gas-filled incandescent lamps on a multiple circuit. The proposed system will provide 140 units of 100 watts each and 12 units of 350 watts each.

Waterworks

The probable cost of installing a new electrically driven pump for domestic supply with and without automatic attachments, and of two fire pumps, one to be driven by an electric motor and the other by a gasoline engine, was investigated. Estimates were submitted and a recommendation was finally made that an electrically driven domestic pump and a gasoline fire pump should be installed.

The town having approved of this, the necessary specifications were issued and tenders were obtained. An order has been placed with the Storey Pump and Equipment Company of Toronto, for one 4-inch, 2-stage centrifugal pump for domestic supply, direct-connected to an automatically-controlled 20-h.p., 3-phase, 25-cycle, 550-volt, 1,500 r.p.m. induction motor, and an 8-inch, 3-stage, centrifugal fire pump, direct-connected to a 4-cylinder, 6 by 6-inch, 1,500 r.p.m., Van Blerck gasoline engine.

The fire pump will replace one of the present steam fire pumps, and the domestic unit will supply the town's ordinary requirements.

Baden

Distributing Station

The three 75-kv-a., Packard Electric Company transformers in service in this station were transferred to Preston Transformer Station in February, being replaced at that time by three 150-kv-a., 13,200/2,200-volt, 25-cycle, Canadian Crocker Wheeler transformers, purchased from the Municipality of Seaforth. The necessary changes in switching and connecting material were made at the time. All work was done by the Commission, being completed on February 11th.

Beachville

Distributing Station

On account of the increase of the load on the Standard White Lime Company's 2,300-volt feeder, which was approximately two miles in length, it was decided to build a new sub-station with increased transformer capacity, and if possible, to locate this station on a site nearer to the White Lime Company's quarries.

The Commission, therefore, procured a site outside the Beachville Municipality, but close to the quarries, on which a standard type "D.L." distributing station building was erected by Wells & Gray, of Toronto.

The transformers installed, which were transferred from the Embro Distributing Station, are three Canadian General Electric Company, 75-kv-a., 13,200/2,300-volt, single-phase, 25-cycle units.

The switching and metering equipment, which is of Siemen's manufacture, was transferred from the Breslau Distributing Station.

Power is supplied over a 13,200-volt line from Woodstock Transformer Station, and two 2,300-volt outgoing feeders are provided, one to the Standard White Lime Company and the other to the Municipality of Beachville.

The new station was put in operation October 26th.

After being taken out of service, the old Beachville Station was dismantled, the switching and metering equipment, which is also of Siemen's manufacture, was transferred to the new Aylmer Distributing Station and the three 50-kv-a, Siemen's transformers were transferred to Cooksville Transformer Station.

All electrical work was done by the Commission.

Brantford Township

During the year the distribution system in Brantford Township, owned by the Western Counties Electric Company, was purchased by the Township. This system was remodelled and extended under supervision of the Commission. It is expected that power will be turned on early in January 1918.

Breslau

The line from Preston serving Breslau was changed to 4,000 volts and the station transformers moved from Breslau to Preston. This has enabled the Commission to supply energy to various farms en route, and about twenty new customers have been obtained along the line and in Breslau.

Distributing Station

As the load on this station did not require the capacity of the transformers installed, the three 75-kv-a, Westinghouse 13,200/2,300-volt transformers originally installed in this station were removed to Acton Distributing Station by the Commission. They were replaced with three 20-kv-a. Canadian General Electric

13,200/2,300-volt transformers taken from stores. It was later decided not to continue operation of this station. Arrangements have been made to feed the Municipality of Breslau from the Preston Transformer Station. These 20-kv-a. units were transferred, on May 6, 1917, to Preston Transformer Station and the station operation discontinued.

The entire switching equipment in Breslau Distributing Station was transferred to the New Beachville Distributing Station.

Brigden

The construction of a standard outdoor pole-type distributing station was authorized in April to supply power to Brigden. The equipment consists of Hydro-Electric Power Commission standard air-brake switch, Delta-Star fuses, choke coils and arrester, one 50-kv-a., 3-phase, 26,400/13,200/4,000/2,300/575-volt, 25-cycle Moloney Electric Company transformer, and one 4,000-volt feeder protected with expulsion fuses. The metering equipment consists of a Canadian General Electric graphic recording wattmeter with suitable instrument transformers housed in a corrugated metal meter house.

All construction work is being done by the Commission and the station will shortly be placed in operation.

Chatham

The Chatham system power load was considerably increased during the year, partly by munition plants and partly by flour mills, which formerly used steam equipment operated by gas-fired boilers, the gas supply in Western Ontario having failed during the fall of 1917.

Clinton

A more favorable showing has been made in Clinton. This was due to the expiration of old contracts assumed when the Commission turned on power. Additional power has also been requested for the flour mill. The consumers were given a reduction in rates during the year.

Dashwood

Estimates were prepared giving a price of $56.75 per h.p. per annum for 50 h.p., delivered at 4,000 volts.

The Commission designed and supervised the installation of the local distribution system. Assistance was also given regarding a layout for the installation of the local flour and chopping mills 50 h.p. motor.

Power was turned on during the month of August 1917.

Drayton

The enabling and money by-laws were submitted and passed, and a contract entered into with the Commission for 100 h.p. at $60.45 per h.p. per year. Upon the request of the village the Commission valuated the local system, which was owned by the Canadian Flax Mills Company, and assisted in the purchasing of the distribution system. Material for the new system has been ordered and is now being installed. It is expected power will be turned on early in 1918.

Dublin

The distribution system was built and Hydro power turned on in the police village of Dublin during the year. The contract was for 50 h.p. at $47.91 per h.p. per year. There is at present one 20 h.p. motor in addition to the lighting.

Distributing Station

The construction of a standard pole type distributing station was authorized in December. The equipment consists of two Hydro-Electric Power Commission air-brake switches to take care of the two incoming lines Delta-Star fuses and choke coils, one 50-kv-a., 26,400/13,200/4,000/2,300/575, 25-cycle, 3-phase Moloney Electric Company transformers, and one 4,000-volt feeder protected by expulsion fuses.

The metering equipment consists of a Canadian General Electric Company graphic wattmeter with instrument transformers, housed in a corrugated metal meter-house. The construction work was done by the Commission, and the station was placed in service on September 23rd.

Dunnville

A new distribution system and sub-station were constructed in Dunnville during the year, and it is expected that the system will be connected to the Niagara System early in the coming year. Dunnville will be supplied with power from the Welland district at 46,400 volts.

Municipal Station

Following the decision of the Town of Dunnville to purchase power from the Hydro-Electric Power Commission of Ontario, and at the request of the local authorities, plans and specifications were prepared covering a new building approximately 40 feet long by 19 feet wide by 22 feet high, as an extension to the existing power-house, to be constructed of brick with a concrete foundation. Tenders were called for and recommendations made, and on July 4th the contract for the building was placed by the local commission with Mr. Robert Bennett, of Dunnville.

Drawings and specifications were also prepared and tenders requested for three 150-kv-a., 26,400 or 13,200-volt high tension, 2,300 or 575-volt low tension, 25-cycle, oil-insulated, self-cooled, single-phase transformers, and for switching equipment to control one 45,700-volt incoming line, one bank of three 150-kv-a. transformers and one 4,000-volt feeder. At a meeting on January 30th, the Dunnville Public Utilities Commission awarded the contract for the delivery and installation of the transformers to the Canadian General Electric Company, and for the delivery and installation of the switching equipment to the Canadian Westinghouse Company. Two 16-k.w. street-lighting transformers with control panels have been ordered from the Canadian General Electric Company and will be installed by the Commission.

The building is practically completed; the transformers will be installed during November, and the street-lighting transformers with their panels have been shipped, and will be installed at the same time as the main switching equipment, which will be shipped during January 1918.

Embro

Distributing Station

Authorization was obtained to purchase a 50-kv-a., 3-phase, 25-cycle, 13,200/2,300-volt transformer for this station to permit the three 75-kv-a., 13,200/2,300-volt transformers previously installed being transferred to the new Beachville Distributing Station. A 50-kv-a. transformer was therefore ordered from Packard Electric Company, St. Catharines, and was installed and placed in service by the Commission on August 16th. The three 75-kv-a. units were then shipped to Beachville.

Etobicoke Township

The Interurban Electric Company, having gotten into financial difficulties, the portion of the company's plant lying west of the Humber River was taken over and operated by the Commission. Plans were prepared covering the rebuilding of these lines and their connection with systems in various parts of the township which had previously been built by the Commission and operated by adjoining municipalities. The work of rebuilding and extending these lines is now well advanced, and when completed will form the most extensive township system receiving power from the Commission, the lines being over 38 miles in extent and serving some 600 customers.

Temporary Distributing Station

The temporary station referred to in the previous Report was erected on the site obtained for the permanent station on the north-west corner of Birmingham and Ninth streets, New Toronto. This temporary building is a frame structure covered with corrugated iron, and is approximately 36 by 15 feet, and is so located on the lot that it does not interfere with the construction of the permanent station.

Two 13,200-volt lines from Cooksville feed into this station through automatic oil switches, with lightning arresters on each line. A 13,200-volt feeder is taken out through a standard air-break switch, to the Mimico Distributing Station. Three 2,300/volt feeders supply power to Goodyear Rubber Company, Brown's Copper & Brass Rolling Mills, Ltd., and to the Municipality of New Toronto.

Instead of using the 300-kv-a. Johnston and Philips transformers mentioned in previous Report, a contract was placed with the Moloney Electric Company for three 750-kv-a., 3-phase, 26,400/13,200/4,000/2,300-volt transformers on December 6, 1916. Two of these were installed and the station put into operation on June 2, 1917. One of these transformers failed on September 21st, and was replaced by the third one, and the damaged transformer returned to factory for repairs. It is expected that it will be ready for shipment by the first of next year.

The building was erected and electrical equipment installed by the Commission and will be used until the permanent station is ready for service, when it will be dismantled and the apparatus used in other stations.

Permanent Distributing Station

Building plans and specifications were prepared for the construction of a distributing station in New Toronto, and the contract for the building awarded to Witchall & Son, Toronto. The structural steel was ordered separately from McGregor & McIntyre of Toronto.

The building is 73 feet by 32 feet 5½ inches by 43 feet 6½ inches high, above ground level, and is of red pressed brick, with stone trimming and steel sash windows. Special large ventilator windows were placed in the wall back of the transformers, and also special ventilators were built on the roof on account of self-

cooled transformers being used. The building is being erected on the corner of Birmingham and Ninth streets, New Toronto, and will be completed early in January.

The building is designed to accommodate four 1,500-kv-a., 26,400/13,200/4,000/2,300-volt, 3-phase, self-cooled transformers with switching equipment for same and for four incoming 26,400-volt, 3-phase lines, and twelve outgoing 2,300-volt feeders, and service transformer equipment. A transformer erection room is also provided at one end of the building, with crane rails on which a 20-ton chain hoist will for the present be supported on a special frame with provision, later on, for installing a crane.

Plans and specifications were prepared for the switching equipment to control an immediate installation of two incoming 26,400-volt lines with provision for two future lines; two 1,500-kv-a., 3-phase transformers with provision for two future transformers; eight outgoing 2,300-volt feeders; one bus tie and one service transformer feeder, and provision for three future feeders. A double 2,300-volt bus will be provided with selective disconnecting switches permitting any transformer or any feeder to be connected to either bus. All oil switches will be electrically operated and controlled from the main switchboard.

The control room in which the switchboard will be located, the office room and the power transformers will be on the main floor. The low tension switching equipment will be located on the second floor directly above the control room, and the high tension switching equipment will be on the third floor. The battery and motor generator set will be located in the basement, where space is also provided for oil tanks and pumps. A partition in the basement under the transformers forms an air duct for cooling the transformers by forced draft, if found necessary.

The station will be operated at 13,200 volts until the proposed York Transformer Station is put in operation, when it will be changed to 26,400 volts.

Tenders were requested for transformers and the electrical equipment required, and a contract was placed in November 1916, with the Canadian Crocker-Wheeler Company for two 1,500-kv-a., 26,400/13,200/4,000/2,300-volt, 3-phase, 25-cycle, self-cooled transformers to be delivered and erected in the station. The contract for the low tension switching equipment to be installed in the station was awarded to the Canadian General Electric Company, September 4, 1917. They are also to supply the high tension equipment, which, however, will be installed by the Commission. Recording meters were purchased from the Canadian Westinghouse Company and Weston indicating meters from A. H. Winter Joyner Co., of Toronto.

A 100-cell "G-4" Edison storage battery was purchased from the Edison Storage Battery Company, Orange, New Jersey, and the 7½-k.w. motor generator set for charging this battery was purchased from the Canadian Crocker-Wheeler Company of Toronto.

It is expected that this station will be completed early next year.

Exeter

This municipality has made good progress in the short time they have been operating. The local plant is well looked after and the auditor's report showing a good surplus.

The local flour and chopping mill has been electrified, and it is expected that the owners of the salt well will at once place an order for a motor. A large number of lighting customers have been added during the year.

Engineering assistance was given with reference to extensions to the municipal system as well as in its operation.

Distributing Station

The 13,200-volt electrolytic lightning arrester ordered in August, 1916, from the Canadian General Electric Company, was delivered and installed in March.

Hensall Feeder

The panel and equipment for controlling the 4,000-volt feeder to Hensall were installed by the Canadian General Electric Company in January and were placed in service. Power, however, was first delivered to Hensall through temporary connections on December 21st.

Zurich and Dashwood Feeder

The order for an additional panel and equipment for controlling a 4,000-volt feeder to Zurich and Dashwood was given to the Canadian General Electric Company on March 24th, and the installation was completed by the Commission on October 29th. This feeder will be connected into service during November.

Forest

The type " H " station referred to in last Report was completed and placed in service on February 7th.

Galt

The operating conditions with 10,400-volt, 4-wire, 3-phase, power, delivered to the municipality was investigated, and estimates were prepared for the local system's changes, also on the changes at present-day prices to receive 13,200-volt power.

The most suitable location for a new main sub-station was gone into with the local management and the building drawings looked over for the new sub-station. The proposed electrical layout was considered, and a report of the same was made to the management of the Galt Hydro-Electric Commission. It was decided that the local system should not go ahead this year with the erection of a new sub-station.

Assistance was given during the year in matters pertaining to the operation of the local system.

Waterworks

Tests on the two motors and the direct-connected pumps in the Galt Waterworks pumping station were made by the Commission.

Glencoe

An engineer visited the municipality in June and estimates were prepared on a supply of 150 h.p. for the municipality, but as the local flour mill was burned in July the requirements for the municipality were limited to 50 h.p. The municipality was given an estimate on 50 h.p delivered at 4,000 volts.

No further action has been taken by the municipality to secure power from the Commission.

Guelph

During the year engineering assistance has been given the municipality from time to time, notably in arranging for a breakdown connection to the 13,200-volt line to Fergus and in arranging for increased station capacity.

Municipal Station

Engineering assistance was given to the Board of Light and Heat Commissioners of Guelph in connection with the purchase and testing of one 225-kv-a., 13,200-volt delta high-tension, 2,300 or 575-volt delta low-tension, 25-cycle, oil-insulated, self-cooled, 3-phase transformer. The contract was placed on behalf of the above Commission with the Canadian General Electric Company in February, and the transformer has been tested and will be shipped early in November 1917.

In July, at the request of the local Commission, prices were obtained on one 550-kv-a., and one 225-kv-a., 3-phase transformer, and on their instructions, a contract was awarded in August to the Canadian General Electric Company for both transformers, delivery to be in August 1918.

Hamilton

In addition to a large addition in domestic and commercial customers during the year, a very important power load was added in the National Abrasives Company, whose contract amounts to 2,700 h.p. This load will be put into operation early in the coming year if sufficient power is available.

Hensall

This municipality has contracts signed for 112½ h.p., and when this load is all on the municipality will be in good condition. Assistance has been given the local system from time to time in regard to contracts, extensions and operations.

Highgate

The system has shown very satisfactory results for the year, and arrangements are being made to supply the local flour mill with Hydro power.

Hespeler

Assistance was given the local Commission on various matters pertaining to the operation of the local system and on extensions to the same.

At the request of the municipality complete tests were made on the domestic turbine pump and on the fire turbine pump, and a report submitted on this.

The operating conditions with 10,400-volt power, 4-wire, 3-phase, delivered to the municipality and the R. Forbes Company, Limited, was investigated and estimates made regarding the changes to the local system, and the company, also, on changes necessary to receive 13,200-volt power along the lines of present-day prices.

Ingersoll

The load for October this year was 858 h.p. taken at 88 per cent. power factor. During the year the distribution system was rebuilt in certain sections to improve the local conditions.

An overdraft in the bank of $15,000 four years ago has been changed to a surplus of $4,000 without the issue of additional debentures, so that the financial condition of the local system is in excellent condition.

The installation of Ingersoll's White Way was completed in January 1917. It consists of twenty-six ornamental cast iron standards of the pendant type with lamp fixtures equipped with bowl refractors. The 1,000 c.p. gas-filled lamps are of 20-ampere rating and are connected to the 6.6-ampere series circuit through

individual transformers located at each standard. The circuit is carried in lead-covered cable drawn into fibre conduit laid under the concrete sidewalk.

The transformers are buried in the ground beside the ornamental standards and the high voltage, therefore, is confined below the street surface. A 22-k.w. constant-current transformer was purchased to provide extra capacity required in part by the new installation.

Cable and cable terminals were supplied for underground distribution feeders out of the municipal sub-station.

Kitchener

The Hydro Department shows a decided increase in load, and additional equipment has been put in service in order to meet the demand. Requests for about 2,000 additional h.p. have been received during the year.

Listowel

During the year the distribution system has been completed to supply power and lighting customers. The ornamental street light has been extended and an electrically-driven pump installed in the waterworks.

London

The load during the year has increased from 7,359 h.p., taken in October 1916, to 9,142 h.p., taken in October 1917, or an increase of approximately 24 per cent. During the year assistance was given in connection with extensions to the local system and in operation of the same. The local system is taking care of a large cooking load, and the customers are very well pleased with the results and the cost of the electric current for this purpose.

The financial report for the year shows a good condition.

Office Building

Engineering assistance in connection with the plans of the new office building was given to the Public Utilities Commission.

Horton street Station

At the request of the Public Utilities Commission, of London, engineering assistance was given by the Commission in connection with the planning of an extension to this station.

When considering increased capacity for this station, it was decided to rearrange the whole existing equipment and the layout. Instead of buying more transformers, each of the capacity of 250-kv-a., it was decided to buy 1,500-kv-a., 3-phase transformers, and to replace the existing 13,200-volt oil switches and the more important 2,300-volt oil switches with switches having a considerably larger rupturing capacity. In order to accommodate this rearranged switching equipment and the larger transformers, an extension to the building, 30 feet wide by 83 feet long by 30 feet high (approximate inside dimensions), with a basement 83 feet long by 13 feet wide under the low tension switching equipment, is necessary. The transformers, with the switchboard and low tension switches, will be located on the main floor, with the constant current transformers and the potential regulators. The 13,200-volt equipment will be located on the second floor. This new arrangement will include a duplicate 13,200-volt bus. Each feeder to this bus will have one oil switch, with a set of selector disconnecting switches for connecting to either bus. A similar 2,300-volt duplicate bus is also being arranged for. The

waterworks feeders with their present switches and bus will be left in their present location close to the water pumps. The 575-volt feeders will be moved and will be connected to a single bus. This will also be done for the street-lighting feeders. Two 1,500-kv-a., 13,200-volt star high tension, 4,000-volt star or 2,300 or 575-volt delta low tension, 25-cycle, oil-insulated, water-cooled, 3-phase, transformers were ordered from the Canadian General Electric Company in April, and are expected to be delivered during November. These transformers will be installed temporarily in the present station to give the increased capacity required during the winter months.

Specifications have been issued and tenders received covering the new switching equipment required. Work on the building extension will not be started until the spring of 1918.

Lucan

The local commission is taking more power than the contract amount of 100 h.p. For the month of October this municipality received and paid for 142 h.p., delivered at 4,000 volts. Both flour and chopping mills installed electric drive, and engineering assistance was given in the installing of electrical apparatus as well as in extensions to serve the additional customers. Advice was given on operating from time to time throughout the year.

Markham

A request for a supply of Hydro power having been received from the Village of Markham, as well as a number of petitions from Markham Township, an investigation was made as to power requirements in this district and estimates prepared on the cost of delivering this power. As the possibility of supplying power in this district depended on the power requirements of other municipalities, the question of this supply is still undecided.

Mimico

The business in this municipality increased to such an extent that it was found necessary to make many additions and improvements to the distribution system, and the amount of such construction was increased by the taking over of that portion of the Interurban Electric Company's system lying within the town. Engineering assistance was given both in obtaining new power and lighting customers, and in advising as to the proper construction for the necessary lines.

Distributing Station

As the feeder to the municipality of New Toronto and to Brown's Copper & Brass Rolling Mills, Limited, which was fed from the three 150-kv-a., 13,200/2,300-volt Crocker-Wheeler Company transformers located in a temporary extension to this station, was changed over to feed out of Etobicoke Temporary Station when that station was placed in service, it was no longer necessary to operate this bank of transformers. The transformers were therefore cut out of service August 23d, and the temporary extension dismantled, the transformers being transferred and shipped to Niagara Falls for use on the Queenston development work.

Because of excessive voltage drop in the 2,300-volt feeders from this station, it was decided to change the secondary voltage from 2,300-volt delta to 4,000-volt star neutral grounded. The necessary additional apparatus was ordered and the change was made by the Commission on September 2d.

As it was found necessary to still operate the Mimico Asylum and Provincial Brick Company feeder at 2,300-volts, it was disconnected from the station bus and connected on the 2,300-volt New Toronto feeder from the Etobicoke temporary station which was brought into this station for metering purposes.

Mitchell

Municipal Station

The three 75-kv-a., 26,400 or 13,200-volt high tension, 575-volt low tension, 25-cycle, oil-insulated, self-cooled, single-phase Canadian General Electric Company's transformers were installed in a new and separate building. This building is the same as the Commission's standard type "G-1" Station and was built by the Corporation of Mitchell. This station will accommodate two incoming 26,400-volt lines, one set of electrolytic lighting arresters, one set of choke coils, one 26,400-volt hand operated automatic oil switch with its current transformers and the three 75-kv-a. transformers. The low tension circuit from the transformers is taken directly out of the new building and carried over to the existing station and connected to the existing 575-volt bus, where the meter for this station is installed. The 26,400-volt lightning arrester, oil switch and current transformers for this station were taken from a stock order which had been placed by the Commission some months ago with the Canadian General Electric Company. The 26,400-volt insulators, choke coils, disconnecting switches, etc., were supplied by the Canadian General Electric Company. The equipment in this station is now being installed by the Commission, and should be ready for service about the middle of November.

Moorefield

The enabling and money by-laws were submitted and passed, and material for the distribution system has been ordered. A contract for power was signed with the Commission on a basis of 25 h.p. at $63.93 per h.p. per year. Power will be supplied from Palmerston at 4,000 volts.

New Toronto

Many additional power and lighting customers having been secured, with a consequent increase in the power demand, it was found necessary to make numerous alterations and additions to the distribution system. On request of the municipality the Commission gave the necessary engineering advice, arranged for the purchase of material and supervised the construction which is now completed.

Niagara Falls

Distributing Station

The equipment described under this heading in the last Report will not be required, owing to arrangements having been made so that the City of Niagara Falls and Stamford Township will be supplied with power direct from the Ontario Power Company's Distributing Station. The material purchased for this work is being used elsewhere.

Norwich

The load on the local system has increased from 171.6 h.p. taken during October 1916, to 231 h.p. taken during October 1917. Assistance was given the local management during the year on the operation of the local system and on extensions.

The local condenser company is considering using a block of 200 h.p. during the coming year to take care of extensions to their plant.

Distributing Station

As the load on this station has increased very rapidly, the three 50-kv-a. transformers now in service are inadequate, and arrangements are now being made to install larger transformers.

Oil Springs

Under the supervision of the Commission, a new system was designed and constructed and it is expected that power will be turned on early in 1918.

Distributing Station

The construction of a standard pole-type distributing station was authorized in April to supply power to Oil Springs. The equipment consists of a Hydro-Electric Power Commission air-brake switch, Delta-Star fuses, choke coils and arrester, one 75-kv-a., 3-phase, 26,400/13,200/4,000/2,300/575-volt, 25-cycle transformer and one 4,000-volt feeder protected with expulsion fuses. The metering equipment consists of a Canadian General Electric graphic recording wattmeter with suitable instrument transformers housed in a corrugated metal meter house.

All construction work is being done by the Commission and the station will be ready for service early in November.

Palmerston

Waterworks

In last year's report mention was made of the fact that a vertical, electrically driven, centrifugal pump had been ordered, and that this pump had been tested at the maker's works.

This pump is installed in a well about 6 feet in diameter and 35 feet deep, and although a good deal of trouble was experienced in getting the steel caisson into place, owing to the presence of quicksand, it was finally accomplished quite satisfactorily. The whole installation has worked very well ever since it was put into service, in March of this year, and has been the means of saving the town a very considerable annual expenditure on coal as well as the wages of one man.

As a precaution against seepage, in order to keep the caisson dry, a small plunger pump, driven by a 1-h.p. electric motor, has been installed in the caisson; this is only operated occasionally.

The caisson is electrically lighted, and a small brick building has been erected over the top of it.

Distributing Station

On August 24th a contract was placed with the Canadian General Electric Company for the supply and installation of one 3-phase, 4,000-volt feeder-panel, including switching equipment and connecting material for one out-going feeder to Drayton. This equipment is due for shipment early in 1918.

Paris

The use of electric power in this municipality has greatly increased, and during the last month of the year they purchased 1,125.1 h.p. For the same month a year previous their load was 398 h.p.

An additional 75 h.p. contract has been signed with the Wincey Mills. The power is to be delivered next spring when the textile machinery for the mill is expected to arrive from England.

Engineering advice was also given the municipality regarding the installation of a new 25-cycle, booster fire pump.

When conditions become normal the local commission expects to have removed the communication poles of companies, as well as its own in business section of the main street, and to improve the business district lighting with an ornamental street lighting system.

Municipal Station

The three 150-kv-a. transformers and other equipment, referred to in last Report, were installed and connected into service on November 24th.

Parkhill

Estimates were prepared for 50 and 75 h.p. to be delivered to the municipality at 4,000 volts.

The Commission investigated conditions in the municipality and gave advice in regard to the operation of a local Hydro-Electric System. All the available power users were convassed, and contracts signed for two years for the local system.

The municipality finally decided to contract for 75 h.p. at $75.23 per h.p. per year. Assistance was given the municipality in the preparation of its money by-law.

A vote will be taken on the money by-law in November.

Petrolia

During the year a great increase occurred in the number of power consumers, due to the majority of oil pumping rigs changing over to the use of Hydro power. A considerable increase in the production of the wells was noted, due to the steady running of the motors.

Sandwich

During the year a contract was signed with this Commission for a supply of power for the Canadian Salt Company's Sandwich plant. The amount of power to be supplied under the contract is 2,000 h.p., and engineering assistance was given the company in connection with the purchase of rotary converters and in connection with the erection of a 26,000-volt sub-station. It is expected that the equipment will be put into operation early in the coming year, if power is available. The power is used in connection with the electrolysis of salt brine, the products obtained being used at the present time entirely in connection with the manufacture of high explosives.

Canadian Salt Company Distributing Station

Drawings and specifications for a sub-station to supply power for two 2,000-kv-a. rotary converters were prepared.

It was decided to install transformer capacity sufficient for one rotary converter at present, with provision for duplicating the equipment as soon as the output of both rotary converters is needed.

A contract was therefore placed with the Moloney Electric Company in March for three 750-kv-a., 26,400/176-volt, 25-cycle, single-phase, water-cooled transformers.

A reinforced concrete building 60 feet by 22 feet in size was erected by the company in accordance with the Commission's plans and specifications.

Switchboard panels were purchased from A. H. Winter Joyner, Limited, and switching, metering and control apparatus from the Canadian General Electric Company and the Canadian Westinghouse Company.

As soon as the equipment is delivered, it will be installed by the Commission and put into service as speedily as possible.

Power will be supplied over two 26,400-volt lines from Essex Transformer Station.

Sarnia

During the year engineering assistance was given to Sarnia in connection with the completion of work in connection with remodelling the distribution system, and also in the construction of a 26,000-volt sub-station.

The 60-cycle, steam-driven equipment in the station, purchased together with the distribution system from the Sarnia Gas and Electric Light Company, was disposed of at very satisfactory figures, and the Sarnia system has shown a very satisfactory operating result for the year.

Street Lighting

The new street lighting system noted in the preceding report as being in course of construction, has been completed and placed in service. The residential fixtures are of the latest type with reflectors designed for use with the concentrated-filament of the gas-filled incandescent lamp. The White Way fixtures are of the bracket type, with diffusing globes, and are mounted on steel poles, which carry the single overhead wire of the series-circuit, and which also support the span wires of the street railway system. On these poles are also mounted the individual transformers for the lamps. These transformers are rated at .516-k.w. 6.6-ampere primary and 20-ampere secondary. The poles are spaced at approximately 105 feet with lamps on all poles, on both sides of the street, in the business district.

Municipal Station

Two of the 750-kv-a., 3-phase transformers were placed in service on November 10th, with one 26,400-volt oil switch loaned from Essex Transformer Station, and some 26,400-volt disconnecting switches from the Canadian General Electric Company, all as referred to in the last Report. The installation of the permanent equipment has been practically completed for the two 26,400-volt incoming lines, three 750-kv-a. transformers, four 28-k.w. constant current street lighting transformers, one 75-kv-a. potential regulator, four 4,000-volt commercial lighting feeders, four 4,000-volt power feeders, etc., all as referred to in the last Report.

In March, the Canadian General Electric Company was not in a position to ship the 410-kv-a. synchronous motor, and arrangements were made for them to express on loan from Peterboro, one 500-k.w. rotary converter which they had available. This rotary converter was connected through six 25-kv-a., 550-volts high tension, 220/110-volts low tension, single-phase transformers to the 575-volt taps on one of the 750-kv-a., 26,400-volt high tension transformers, and rotary was placed in service about April 1st. It was essential to supply this service from 25-cycle power, in order to release one of the steam turbines for use in a munition plant. The 410-kv-a. synchronous motor was placed in service on September 28th.

On September 26th, the contract was placed with the Canadian Westinghouse Company on behalf of the Sarnia Hydro-Electric System for three 185-kv-a.,

2,300-volts high tension, 25-cycle, oil-insulated, self-cooled, single-phase transformers, suitable for operation in a bank with the high tension star connected for 4,000-volt grounded neutral service, and with the low tension double-delta connected to operate satisfactorily with a 500-k.w., 600-volt rotary converter, which is being supplied by the Canadian Westinghouse Company to the Sarnia Street Railway Company, but which will be installed in this station. These transformers are due for shipment in February 1918.

Scarborough Township

During the year the township entered into an agreement with the Commission for a supply of electrical energy. The Commission drew up plans and specifications for an extensive distribution system in the south-western and central portions of the township, including a street lighting system along Kingston road and vicinity. Instructions have been issued for the building of these lines, and it is expected that they will be completed about the middle of the coming year.

Seaforth

Municipal Station

The three 150-kv-a., 26,400 or 13,200-volt high tension, 2,300 or 575-volt low tension, single-phase transformers, referred to in the last Report, have been delivered by the Canadian General Electric Company, and were installed and connected for 13,200-volts on the high tension. All the 26,400-volt switching equipment and connecting material have been shipped for changing from 13,200-volts on the high tension to 26,400 volts, and the Commission expects to commence installation of same within the next few weeks. The three 150-kv-a., 13,200-volt, single-phase Canadian Crocker-Wheeler Company's transformers were shipped to Baden Distributing Station.

Stamford Township

The system purchased by the township from the Ontario Distributing Company has been operated by the Commission for the township. The necessary engineering assistance was given in remodelling and extending the system, and it is expected that the township will take over the operation of the system early in 1918.

Stratford

The new sub-station which is to be as complete and modern as is possible is nearly completed, and the large transformers were used in a temporary position in order to take care of the increased load during the year. A number of new power customers were connected and considerable revision has been made in the distribution system. Users of direct current were notified that this class of power would not be given after September 1, 1917, and new 25-cycle motors have been purchased to take the place of the direct current equipment.

Municipal Station

Contract for construction of a building to cover requirements of the Stratford Utilities Commission was awarded, on their instructions, to Mr. Robert Marson, of Stratford, on the basis of drawings and specifications which were sent to the Local Commission in October 1916.

The contract included supply and erection of structural steel which was furnished by the Stratford Bridge Works. The building was constructed adjoining the

original sub-station, and is 54 feet 6 inches long by 30 feet wide by 42 feet 9 inches high from basement floor to top of parapet wall. Masonry, construction of walls and floors, etc., is in accordance with Hydro-Electric Power Commission's general specifications. The building contains two storeys and a basement over entire area.

Construction of building was started in December 1916, and work has been completed.

On June 1, 1916, the contract was placed with the Canadian General Electric Company for three 750-kv-a., 26,400 or 13,200-volts star high tension, 4,000-volts star or 2,300 or 575-volts delta low tension, 25-cycle, oil-insulated, water-cooled, 3-phase transformers. One transformer was placed in service in a temporary building beside the old station on November 16th. The second and third transformers were shipped on February 2d, and one was placed in service, both being in the temporary building. On February 22d the contract was placed with the Canadian General Electric Company, on behalf of Stratford Utilities Commission, for the necessary switching equipment and for a 100-kv-a. potential regulator, all as referred to in the last Report. The high tension switching equipment has been received and installation of same has been commenced by the Commission. The 2,300-volt switching equipment will be shipped during November, and it is expected that this station will be ready for service early in 1918.

Strathroy

During the year the Utilities Commission placed an order for an electrically-driven fire pump, so that with the gasoline engine unit for fighting fire this municipality should be in good condition in that respect.

A large number of consumers have been added, and the local distribution system is in excellent condition and is steadily improving. The auditor's report shows a good surplus for the year.

St. Jacobs

During the year the Police Village of St. Jacob's was connected to the Niagara System. Power is being supplied to the flour mill in addition to the lighting load.

Distributing Station

The construction of a standard pole type distributing station was authorized in February to supply power to St. Jacob's. The equipment consists of a Hydro-Electric Power Commission air-break switch, Delta-Star fuses and choke-coils, one 75-kv-a., 3-phase, 25-cycle, 26,400/13,200/4,000/2,300/575-volt, Maloney transformer and one 575-volt feeder protected with fuses. The metering equipment consists of a Canadian General Electric graphic watt-meter and instrument transformers housed in a corrugated metal meter-house. The installation work was done by the Commission and the station was placed in service on August 28th.

St. Marys

The local system suffered considerably from the loss, by fire, of one of the largest power customers during the year. This was offset somewhat by new customers and the operating report is very favorable. A small electrically-driven domestic pump and a gasoline-driven fire pump have been ordered for the water-works station.

Distributing Station

The installation work for the second bank of transformers, referred to in last year's Report, is almost completed, but owing to the transformers having been badly damaged by the Railway Company while being shipped from Stratford to St. Mary's, new tanks must be obtained before they can be put in service.

St. Thomas

The financial report for the St. Thomas Hydro-Electric System for the year shows the usual good results. At the present the city has approximately 3,070 customers made up of 2,488 domestic lighting, 470 commercial lighting customers, and 112 power consumers, taking a demand for October of 2,037.5 h.p.

In order to improve the lighting service the local management requested data on an automatic voltage-regulator, which was prepared by the Commission, and it is expected that the city will order this equipment at an early date.

Street Lighting

A plan was prepared for the local commission to take out of service the twenty Magnetite arc lamps, which are still in use. It is the intention to add forty-four gas-filled, incandescent lamps to the present system, and an additional constant-current transformer of 30-k.w. capacity, to provide for present and future extensions.

Underground distribution feeders out of the new municipal sub-station were supplied and installed by the Commission in the conduit system constructed as previously reported.

Municipal Station

The building which was referred to in the last annual Report was completed on November 23, 1916.

The installation of the electrical equipment by the Commission was completed sufficiently to place the station in service in April with one 13,200-volt incoming feeder connected. The second 13,200-volt feeder was connected on May 5th, and the installation completed on May 19th. The entire installation and change of equipment from the old station to the new station was made without any serious interruptions to service.

A third 750-kv-a., 13,200/2,300-volt, 3-phase, Canadian General Electric Company transformer was purchased and placed in the station in August to be used as a spare unit.

At the request of the local commission, drawings were prepared in February to cover the design of an exterior entrance to the basement of the new building to admit their motor truck. The work on this entrance was arranged for by the local commission.

Tavistock

This municipality signed a contract for only 50 h.p. and it is gratifying to see, after approximately one year's operation, the load increased to 229 h.p.

Engineering assistance was rendered to the Tavistock Milling Company on the purchase of its motors and a panel for switching and metering equipment. The extensions to the local distribution system were made on advice from the Commission.

Waterworks

As in the case of Palmerston the preliminary work done in connection with pumping in this town is referred to in the 1916 report. Since then the equipment described, consisting of a 4 by 4 inch, 60 Imperial g.p.m. Luitwieler pump, driven by a 3 h.p. electric motor, and automatically operated, has been erected. The unit has been in operation since installation.

Distributing Station

This station was placed in service at 13,200-volts temporarily on October 26, 1916, as described in the last Report, but the permanent installation was not completed until November 21st. The three 75-kv-a., 26,400 or 13,200-volt high tension, 2,300 or 575-volt low tension, 25-cycle, oil-insulated, self-cooled, single-phase, Canadian Crocker-Wheeler Company transformers, were shipped from St. Catharines on March 22d, and was placed in this station about April 1st. These three 75-kv-a. transformers were placed in service on August 4th, connected for 13,200 volts on the high tension and 575 volts on the low tension, at which voltages this station is now operating. The three 25-kv-a. Moloney transformers used temporarily in this station were released and returned to stock.

Tillsonburg

Contracts were obtained for the local system amounting to 370 additional h.p. from the Canadian Cereal Company. Engineering assistance was given the municipality regarding extensions to the local system to care for this additional load as well as other matter pertaining to the operation of the local plant.

The auditor's report for the year shows a substantial surplus.

Toronto Township

The Interurban Electric Company's system having been absorbed by the Commission, it was found necessary to provide for the continuance of a supply of electrical energy to former customers of that company in the Hamlet of Erindale. An investigation was made of the situation by the Commission and plans made for serving this district by an extension to the Toronto Township system. The Erindale lines were rebuilt and new lines constructed so as to make these a portion of the township system. Plans and estimates have also been made providing for various other extensions, a portion of which have already been built.

Vaughan Township

Various petitions were received from residents of the township and the Hamlet of Maple. Acting on these petitions the Commission investigated the situation and found that sufficient business could be secured to warrant the building of a distribution system. Plans were consequently prepared and instructoins issued covering such a system. Power is to be supplied from the Woodbridge transformer station.

Wallaceburg

During the year arrangements were made to increase the sub-station capacity in Wallaceburg, to take care of additional customers including the Chatham, Wallaceburg and Lake Erie Railway Company, and an additional load at the Dominion Glass Company's plant.

Distributing Station

Owing to the increasing load at this station, it was decided to increase the transformer capacity of this station by installing a second bank of three 150-kv-a., 26,400/2,300-volt, single-phase transformers.

As there was not sufficient room in the present station for the additional equipment, it was decided to purchase from the local commission the section bank of transformers in this room, strengthening the floor, and making other necessary changes in the building.

Plans are being prepared showing the changes required in the electrical layout, and in the building, and quotations were requested on the additional electrical equipment. Three 150-kv-a., 26,400/2,300-volt, single-phase transformers ordered previously for stock from Packard Electric Company were transferred to this work and will shortly be ready for shipment.

The present 26,400-volt oil switch will control both transformer banks, but each bank will be connected through a set of disconnecting switches. On the low tension side, each transformer bank will have its own oil switch connecting it to the 4,000-volt bus, the secondaries of the current transformers on these lines being connected in parallel to the recording wattmeter to reach the total load. Provision is also being made for the installation of an additional 450-kv-a., 4,000-volt feeder equipment for the municipality.

Waterloo

The operating report is satisfactory and shows a very staple condition of the local system. An extension to serve a number of farmers was built north of the city. New electrically-driven pumps have been installed in the waterworks, and water is being supplied to the City of Kitchener.

Watford

The old plant was purchased by the municipality and a distribution system was installed under supervision of the Commission. The station equipment consists of one 50-kv-a. 26,400/4,000 outdoor transformers in the standard pole type station. Power was turned on August 11, 1917. The number of lighting consumers was increased 50 per cent. and two power consumers are also being supplied.

Distributing Station

The construction of a standard pole-type distributing station was authorized in November to supply power to Watford. The equipment consists of a Hydro-Electric Power Commission air-brake switch, Delta-Star fuses, choke coils and arrester, one 50-kv-a., 3-phase, 26,400/13,200/4,000/2,300/575-volt, 25-cycle Moloney Electric Company transformer, and one 4,000-volt feeder protected with expulsion fuses. The metering equipment consists of a Canadian General Electric graphic recording wattmeter with suitable instrument transformers housed in a corrugated metal meter house.

All construction work was done by the Commission and the station was placed in service August 11, 1917.

Welland

Engineering assistance was supplied to Welland in connection with the construction of a new sub-station. The station will be supplied with power at 46,400-volt power.

Distributing Station

At the request of the Welland Hydro-Electric Power Commission, drawings and specifications were prepared covering a new sub-station building, and at a meeting of the Welland Commission on January 16, 1917, the contract was awarded to Mr. J. C. Diffin, of Welland. This building will accommodate four 1,500-kv-a., 3-phase transformers, together with their switching equipment, and for two incoming and two outgoing 45,700-volt, 3-phase lines, and the switching equipment for five 2,300-volt lighting feeders and eight 2,300-volt power feeders. The building is now practically completed. It is 55 by 35 feet by 36 feet high, inside dimensions, with a 10-foot basement under the whole building. The building is constructed of pressed brick with reinforced concrete floors. The roof is supported by steel beams and columns, and with a concrete foundation.

Drawing and specifications were made up and tenders obtained on switching equipment to control one incoming and one outgoing 45,700-volt line, two 1,500-kv-a., 45,700-volt, high tension star, 2,300-volt low tension delta, 3-phase oil-insulated water-cooled transformers, three 2,300-volt lighting feeders, one 100-kv-a., a potential regulator, four 2,300-volt power feeders, and one bank of station service transformers with 110/220-volt station service feeders. The contract for this switching equipment, including the installation of it, was awarded to the Canadian Westinghouse Company on May 17, 1917.

Tenders on two 1,500-kv-a., 45,700-volt star or 26,400-volts high tension, 4,000-volt star or 2,300 or 575-volt delta low tension, 25-cycle, oil-insulated, water-cooled, 3-phase transformers, were obtained and reported on, and the order was placed with the Canadian Crocker-Wheeler Company by the Welland Hydro-Electric Power Commission. On September 16th one of these transformers was put into service temporarily with the necessary switching equipment, of which the 45,700-volt choke-coils and disconnecting switches were borrowed from spare equipment at Niagara Station. Arrangements are such that the load on this station is metered on the 45,700-volt incoming line. The permanent switching equipment will be shipped in December and January next.

Wellesley

An additional power load of 37½ h.p. was obtained during the year, bringing the total load taken by the village over 100 h.p. The operation has been very satisfactory.

West Lorne

Distributing Station

The type "E-2" station referred to in last Report was completed, and, with the exception of Rodney feeder panel, was placed in service on December 22, 1916. The Rodney feeder was placed in service with temporary connections on January 15th, and the permanent work on same was completed and the new panel put into service on February 2, 1917. The installation of recording meters on the feeder panels was completed on February 22d. All installation work was done by the Canadian Westinghouse Company.

Weston

Municipal Station

The installation of the transformer equipment in the Canada Cycle and Motor Works at Weston, which was mentioned in the last Report, was completed and put in service on January 1st by the Commission.

In addition to this work, the Commission received a request from the Corporation to obtain larger transformers for the municipal station to replace the original 50-kv-a. transformers. It was arranged to transfer three 100-kv-a. Canadian Westinghouse Company 26,400/13,200/2,300/575-volt, 25-cycle, single-phase transformers from Niagara Falls Transformer Station, which had been used there for a short time to supply power to the City of Niagara Falls.

Windsor

A number of additions were made to the ornamental street lighting system during the year, and the Water Commission is now considering the installation of electrical-operated pumps at the municipal pumping plant.

Woodbridge

Distributing Station (Vaughan Township Feeder)

Plans are being prepared for a 4,000-volt feeder to supply power to Vaughan Township. The feeder will be tapped off the present Woodbridge feeder through expulsion fuses and metered by a type "R.O." Westinghouse demand meter. The equipment will be installed by the Commission.

Zurich

Engineering advice was given this municipality regarding the operation of a local Hydro-Electric System. The town has contracted for 50 h.p. to be delivered at a cost of $69.34 per h.p. per annum.

The Commission looked after the layout of a distribution system to best meet the local requirements, and supervised the installation of this. A foreman and linemen were procured for the municipality and all labor was paid locally.

The Commission also obtained for the town a contract with the local flour and chopping company for 50 h.p.

Advice has been given from time to time in connection with the operation since power was turned on which was in August 1917.

SEVERN SYSTEM

GENERAL

The year closing October 31, 1917, has proved to be most successful in every respect as far as the Severn System is concerned since plant was taken over by the Commission.

The demands for power in the various municipalities necessitated purchase of a large block of power from the Eugenia System which was supplied over the tie-line between the Eugenia development of the Collingwood sub-station. The transmission line from Port McNicoll to Penetang was double-circuited and the size of the conductor increased from Midland sub-station to Penetang, from No. 2 B. & S. aluminum to No. 2 B. & S. copper. Plans were prepared covering an extension to the generating station at the Big Chute which included the installation of an additional 2,000-k.w. generator. Investigations were also made covering the construction of an additional transmission line from the Big Chute Plant to Waubaushene and also the construction of an inter-switching station at the latter point. Plans were prepared covering the installation of additional switching equipment at all of the large sub-stations connected to the system, in order to provide for taking care of additional loads.

POWER CONSTRUCTION

Big Chute Generating Station

In view of the rapid increase in the power demands of the Severn System, it became necessary, early in 1917, to proceed with the extension of the Big Chute Generating Station; this plant is located on the Severn River, about four miles below the station of Severn Falls on the Canadian Pacific Railway. The present installation consists of three hydro-electric units, each of about 1,100 brake h.p.

To secure the necessary additional capacity, a new penstock and a fourth turbine were required, together with two new valves, head gates and the necessary power house sub-structure and superstructure.

In May 1917, contracts were let for these. The Dominion Bridge Company, of Montreal, secured the contract for the steel penstock which is 9 feet in diameter, and about 170 feet long. The installation is to be completed in December 1917. The Wellman-Seaver-Morgan Company's tender for a double-runner spiral case turbine, of 2,300 brake h.p., under a 56-foot head, running at 300 r.p.m., was accepted. Deliveries to be in February 1918. The contract for two 66-inch diameter gate-valves, together with two head-gate mechanisms, was awarded to the Boving Hydraulic and Engineering Company, of Lindsay. Considerable trouble was experienced in securing the necessary sand and gravel on account of the location of the plant, and the poor transportation facilities. Satisfactory progress, however, has been made, the power house sub-structure being completed and ready for the assembly of the penstock and turbine, while some of the concrete has been poured in the superstructure. The valves on the cross-over between No. 1 and No. 2 penstocks have been set and the penstock material is all on the ground.

The contract for the necessary excavation and concrete work was placed in September with Messrs. Wells & Gray, of Toronto. This extension will be approximately 38 by 69 by 30 feet high over the generator room and 40 feet high over the transformer and high tension rooms. The building will be reinforced concrete, and is expected that it will be completed early in 1918.

Tenders were obtained on the 1,600-kv-a., 300 r.p.m., 2,200-volt, 3-phase, 60-cycle, waterwheel type generator, and in June the contract was awarded to the Canadian General Electric Company.

When making the extension to the station, it was decided to remodel the high tension switching room by installing duplicate 22,000-volt busses, making all 22,000-volt oil switches electrically operated. It was also decided to install equipment for one new 22,000-volt outgoing line and to remodel the 22,000-volt arresters, and to provide space for equipment for two future lines, one to Orillia and one to Waubaushene.

The present switchboard will be rearranged in order to provide space for the panels to control the new and future 22,000-volt lines. New 2,200-volt electrically-operated oil switches will be installed for the low tension sides of the transformers, and the present transformer switches will be used for the new generator and for the station service transformers.

Tenders have been obtained on the new switching equipment required and the order for same will be placed during the next month. The new unit should be in operation in the early part of 1918.

MUNICIPAL WORK

General

Enabling by-laws were submitted to and approved by the electorates of the following municipalities for the purpose of authorizing the execution of new agreements with the Commission covering the delivery of power:—

Penetang, Coldwater, Midland, Elmvale, Barrie, Stayner, Creemore, Collingwood.

These new contracts permit the municipalities to participate in the joint ownership of the Big Chute development, purchased by the Commission after the completion of the original contracts, and also to share in any other development and works required from time to time in the future, as may be needed to supply increased demands for power. Estimates of power costs and rates under the new agreements were prepared by the Commission and submitted.

Assistance was also given by the Commission to each municipality in placing the question before the electors and at public meetings. New agreements were prepared and duly executed by the officials of the municipalities and the Commission.

An investigation of rates was made by the Commission for all municipalities in the Severn System, covering both power supplied by the Commission to the municipalities and also power supplied by the municipalities to their respective customers.

Reductions were duly authorized by the Commission in the following municipalities: Collingwood, Barrie, Stayner, Midland, Penetang, Victoria Harbour, Port McNicoll and Waubaushene.

Estimates covering the cost of power were prepared and submitted, valuations of existing plants were made, the cost of distribution systems determined and assistance was given by the Commission in laying this information before the ratepayers, prior to voting on money and enabling by-laws. This was done in the following municipalities: Alliston, Beeton, Tottenham, Bradford, Cookstown, and Thornton.

Enabling and money by-laws were submitted and carried in all of these places, and agreements were completed with the Commission for the delivery of power. Assistance of a similar nature was also given to the Police Village of Hillsdale and Floss Township (for the Hamlet of Phelpston), but the submission of by-laws was deferred in these places until a later date.

Engineering advice and assistance was given to the following municipalities in the nature of soliciting power loads and new customers, also in various matters pertaining to the operation and management of their systems, and periodical trips were made by engineers of the department to each town and village for the purpose mentioned:—

Penetang, Midland, Victoria Harbor, Port McNicoll, Waubaushene, Coldwater, Elmvale, Barrie, Stayner, Creemore, Collingwood.

Estimates and reports were prepared and submitted covering rates and cost of service to the following townships or portions of same:—

Innisfail, Essa, Tecumseh, West Gwillembury, Tossorontio.

Alliston

Waterworks

Towards the end of the summer a request was received from the town asking that an engineer be sent to look into the question of the provision of electric pumps.

As a result, it is intended to install:

(1) A.6-in.3 stage, 550 Imp. g.p.m., centrifugal fire pump, capable of working against a head of 130 lbs. per sq. in., direct-connected to a 75 h.p., 3-phase, 60-cycle, 550-volt, 1,200 r.p.m. induction motor.

(2) A.3-in.-2 stage, 150 Imp. g.p.m., centrifugal domestic pump, capable of working against a head of 65 lbs. per sq. in. pressure, and also capable of delivering 250 Imp. g.p.m. against 50 lbs. per sq. in. pressure, direct-connected to a 15 h.p., 3-phase, 60-cycle, 550-volt, 1,700 r.p.m. induction motor with automatic control.

Early in January next a by-law relating to the foregoing is to be voted on by the people.

Distributing Station

A standard type "H" station was authorized for Alliston, and the building contract was awarded to Wells & Gray, Toronto, who completed the building in October.

The station will be fed by one 22,000-volt line through air-break switches and will be equipped with Delta-Star outdoor arresters. The station equipment will consist of three 40-kv-a., 22,000/2,200-volt, single-phase, 60-cycle, Canadian Westinghouse Company transformers, with one 4,000-volt, 250-kv-a., outgoing feeder.

The Canadian Westinghouse Company were awarded the contract to supply and install the switching equipment in this station except the low tension arresters and the switchboard meters. Weston indicating meters were purchased from A. H. Winter Joyner, Limited, and the recording wattmeter was purchased from the Niagara Electric Improvement Corporation. Garton-Daniels low tension arresters are being supplied by the Commission. Two of the transformers will be transferred from Hanover, where they were formerly in service, and a third transformer will be purchased to complete the bank. The installation will be completed early next year.

Street Lighting

There will be installed in the Alliston Distributing Station for the Municipality one 16-kv-a., 4-ampere, 60-cycle, Canadian General Electric Company constant current transformer to supply street lighting. This transformer was purchased from the Municipality of Orangeville, and installation will be done by the Commission.

Camp Borden

Municipal Station

The purchase and installation of an additional 4,000-volt feeder panel and connecting material for the Camp Borden municipal station was authorized by the Department of Militia and Defence in March 1917, to supply the Aviation Camp.

A rush order was placed with the Canadian Westinghouse Company on March 12, 1917, and the panel was shipped on May 2d and immediately installed by the Commission, and connections were made. The wattmeters of the "R.O." type, were not shipped with the panel and a temporary Esterline wattmeter was installed by the Commission. The "R.O." meters, when received, were promptly installed and all details of the work were completed on July 27th.

Cables were supplied and installed by the Commission in an underground conduit system constructed for the use of the Aviation Department at Camp Borden.

Special street lighting equipment was designed and installed by the Commission for the illumination of the roadways at this camp during the year.

Collingwood

During the year an extension was made to the distribution system for the purpose of supplying power to a large steel plant and electric smelter. All of the construction work and engineering was performed by the Commission.

The increase in power supplied in this municipality also necessitated the installation of special and additional apparatus in the sub-station for supplying a portion of the load from the Eugenia System, which ties into the Severn System at the Collingwood station.

The total increase in power supplied to consumers in Collingwood during the year 1917 exceeded by 1,000 h.p. the previous year's demand.

Distributing Station

Plans were prepared for the construction of a 24 by 27 by 25 ft. high extension on the end of the present building to accommodate a 22,000-volt tie-line to the Eugenia System, and to provide for a second bank of transformers in future. The extension, which was built on contract by Mr. H. G. Wynes, of Collingwood, was made similar to the present building except that it was four feet higher, to obtain more head-room for the electrical apparatus.

The arrangement of the electrical equipment was changed to have two 22,000-volt lines from the Severn System and one from the Eugenia System enter the station and to connect to a double bus through oil switches and selector disconnecting switches, each line having its own lightning arrester. Potential transformers were also placed on each line, and a synchroscope provided so that lines could be synchronized. The present transformer bank was also provided with an oil switch and selective disconnecting switches, and space was left for a similar arrangement for a future transformer bank.

A contract for the necessary electrical equipment was let to the Canadian General Electric Company, but the graphic wattmeters were obtained from the Canadian Westinghouse Company, and the Weston indicating meters from A. H. Winter Joyner.

Two additional 2,300-volt feeder panels and equipment were ordered, one to supply the William Kennedy Company, Limited, and one to supply the Collingwood waterworks. These are being installed for the municipality in the Collingwood distributing station by the Commission.

To improve the power factor of this station, the Collingwood Water and Light Commission purchased from the Kingston Civic Utilities a 312-kv-a. Westinghouse synchronous generator, to be used as a synchronous condenser, with the switchboard panel to control it. The Collingwood Commission also purchased from the Power Plant Equipment Company, of Toronto, for use with this machine, a 15-k.w. Holtzer-Cabot, 110-volt exciter, direct connected to a 20 h.p. Westinghouse induction motor. This motor is belted to the 312-kv-a. generator, and is used to bring the generator up to synchronous speed. The generator then is used as a synchronous motor, driving the exciter. This set was first placed in service on October 31, 1917.

All the installation work is being done by the Commission and it is almost completed.

Midland

Due to increased demands for power by new and existing customers, a complete rearrangement was made in the distribution system power feeders in the municipality. All engineering and construction work in connection with these changes and extensions was performed by the Commission.

Old Distributing Station

Owing to the steadily increasing load on this station, it was found necessary to increase the transformer capacity, and three 300-kv-a. 22,000/2,300-volt, single-phase, 60-cycle, Moloney transformers were purchased and installed in March, replacing three, 150-kv-a., 22,000/2,300-volt, single-phase Moloney transformers, which were then transferred to Orangeville distributing station.

New Distributing Station

It was later decided to construct an entirely new sub-station building in a more suitable location close to the waterworks station and arrangements were made to that end with the Midland Water and Light Commission. At the local Commission's request plans and specifications were prepared for a new sub-station of a modified standard, "G.L." type. Specifications call for a brick building 34 by 26 by 17 feet, 10 inches high. These plans were transmitted to the Midland Commission which had the building erected and completed in June.

The new station is fed by two 22,000-volt incoming lines through oil switches to the high tension busses which feed the three 300-kv-a., 22,000/2,300-volt, single-phase power transformers. Both lines are protected by electrolytic lightning arresters, and the oil switches have reverse power and definite time overload relays for automatic tripping. The transformer low tension delta bus is connected through an oil switch to the 2,300-volt bus at the switchboard, and from this bus four feeders are taken out of the station through automatic oil switches, one of these being taken through a conduit underground to operate the waterworks pumps in the pumping station near by. Another feeder is taken off the busses, through expulsion fuses, and carried across the end wall to a panel controlling a 35-k.w., type "R.N.", Canadian General Electric constant-current transformer, from which a series street lighting feeder is taken out of the building. All the oil switches are hand operated, and are of remote control type, except those on the waterworks and street lighting feeders, which are mounted directly on the panels.

The Canadian General Electric, 35-k.w., constant-current transformer, with its panel, was removed from the pumping station to the new station. The three 300-kv-a., 22,000/2,300-volt, single-phase Moloney power transformers: two 22,000-volt disconnecting switches were obtained from the old Midland distributing station, together with four switchboard panels and their equipment, and busses back of the switchboard and other available apparatus, as much material as possible being used from this old station.

One new 22,000-volt electrolytic arrester was purchased from the Canadian General Electric Company, and the waterworks feeder panels and equipment was purchased from the Canadian Westinghouse Company. Insulators and other apparatus necessary to complete the installation were purchased from various other companies.

The equipment is being installed by the Commission and the transformers were removed to the new station and placed in service on August 27th, but the installation has not been entirely completed due to the non-delivery of some of the apparatus.

Orillia

Due to the heavy demands for power in the municipality, arrangements were completed with the Commission for supplying large blocks of power to various industries engaged in the manufacture of war munitions.

An additional contract was executed between the municipality and the Commission, covering a permanent supply of power from the new Swift Rapids' plant under construction by the town. This contract covered the paralleling of the Swift Rapids' generating station with the generating stations located at the Big Chute, Wasdell's Falls and Eugenia, the joint use of transmission lines and the supplying of emergency power by both parties.

Port McNicoll

Distributing Station

Owing to increase in load on the transformers in this station, authorization to purchase larger transformers was given, and three 500-kv-a. 22,000-volts (primary), 575-volt (secondary), single-phase, 60-cycle, water-cooled transformers, having a 333-kv-a., self-cooled rating, were purchased from the Canadian General Electric Company on February 13th to replace the existing three 250-kv-a., self-cooled transformers. In order to improve the operating conditions at this station for the increased load it was decided to rearrange the switching equipment so that there would be an oil switch and a lightning arrester on each of the two incoming 22,000-volt lines. It was also decided to locate the 500-kv-a. transformers and 22,000-volt oil switches on the main floor instead of in the basement, where the 250-kv-a. transformers are located. In order to accommodate this arrangement the Canadian Pacific Railway Company is preparing to make the necessary changes in the building.

The necessary additional switching equipment for the above has been purchased from the Canadian General Electric Company. It is expected that the 500-kv-a. transformers will be installed in November. Arrangements are being made to install the permanent equipment during January and February, when the load on the elevator is very light. The three 250-kv-a. transformers will be transferred to Durham Cement Company's distributing station.

EUGENIA SYSTEM

GENERAL

The second year of operation of the Eugenia System has been a most successful one. The tie line between the Power House at Eugenia and the Severn System lines at Collingwood constructed during the latter part of 1916 has been in operation throughout the entire year and has enabled the Commission to market all of the surplus power available at the Eugenia development in the municipalities located in the Severn district and has made possible the maintenance of an ideal load factor at the Eugenia Falls generating station.

The loads in the municipalities connected to the System have manifested a steady increase and several new customers have been secured throughout the district. The total increase in the demand for power has been such that it has been found necessary to double the capacity of the plant and install an additional 4,000 h.p. unit. Construction work on this extension is progressing favorably, and it is expected that the new unit will be in operation early in 1918. During the year four additional municipalities were connected to the system and provision made for supplying four others to be added early in 1918.

By-laws were submitted and carried in two municipalities.

At the close of the fiscal year—October 31, 1917—fifteen municipalities were being served by the Eugenia System.

Distribution systems inclusive of street lighting were designed, constructed and completed in the following municipalities during the year, under the supervision of the Commission, and Hydro service was given for the first time to such systems from the Commission's transmission lines:—

Arthur, Tara.

Estimates and reports were prepared and submitted covering rates and cost of Hydro service to the following Townships or portions of same:—

Brant, Bentinck, Derby, Collingwood, East Luther, Amaranth, Caledon, Artemesia.

Engineering assistance and advice were given to the following municipalities in the matter of rate application, soliciting of power loads and new consumers and other matters pertaining to the operation and management of their respective systems:—

Owen Sound, Chatsworth, Markdale, Flesherton, Dundalk, Shelburne, Orangeville, Grand Valley, Arthur, Mount Forest, Holstein, Durham, Chesley.

An investigation was made by the Commission covering the delivery of power to the following municipalities. Estimates were prepared, possible power demands and transmission line routes determined upon and reports submitted covering these conditions:—

Walkerton, Mildmay, Formosa, Clifford, Teeswater, Wingham, Lucknow, Ripley, Gorrie, Fordwich, Wroxeter, Brussels, Blyth, Kincardine, Paisley, Southampton, Port Elgin, Wiarton.

Valuations were made during the year by the Commission of the following privately owned power developments, including transmission lines and distribution systems with the idea of utilizing the same in connection with the Eugenia development for supplying power to the district adjacent to each:—

Hanover Electric Light and Power Company, Hanover.

Sauble Falls Power Company, Wiarton.

Cataract Power Company, Orangeville.

Walkerton Electric Light & Power Company, Walkerton.

Saugeen Electric Light and Power Company, Southampton.

Valuations were made, distribution systems designed and estimates prepared for the following municipalities for the purpose of determining the cost of Hydro service:—

Wiarton, Wingham, Walkerton.

POWER CONSTRUCTION

Eugenia Falls Generating Station

This plant is located on the Beaver River, near the village of Eugenia, and was completed and placed in operation on November 18, 1915.

Early in 1917, the load demand on the system was increased to such an extent that it was decided to increase the initial capacity of the plant, which now consists of two units, each 2,250-brake horse-power, direct-connected to 1,400-kv-a. generators.

On June 7, 1917, a contract for a single runner turbine delivering 4,000 h.p. at 720 r.p.m. under a 550-foot head, was let to the Allis-Chalmers Company, of Milwaukee.

The original designed maximum installed capacity of this plant was fixed at four 2,250 h.p. units, but the plan, as it will be completed, will contain two 2,250 h.p. units and two 4,000 h.p. units.

The Eugenia system now feeds the Severn system during peak-load hours, and will later be tied-in with the projected plant on the Saugeen River near Port Elgin. The high head and large reservoir capacity of the Eugenia Station make it unusually efficient as a peak-load plant. The market conditions at the time of letting the contract practically prohibited the obtaining of a unit of the same capacity as the previous ones installed, while the Allis-Chalmers Company had already developed and had patterns available for the larger unit. These reasons primarily influenced the decision to install the 4,000 h.p. unit, the construction of which is now well advanced in the shops. Delivery of this unit is expected in the early part of 1918.

A contract for the steel distributor and connection to No. 1 penstock was let to the Canadian Des Moines Bridge & Iron Company, of Chatham, for delivery in January 1918.

The new unit will run on water delivered by No. 1 penstock, which now supplies the two original units. Space has been provided in the generating station for the fourth unit. When this is installed, it will be necessary to install the second penstock and surge tank.

It is expected that the new unit will be in operation by April 1918.

Electrical Equipment

Both a high tension and low tension double bus system are to be installed throughout, and also a second bank of power transformers, a Tirrill voltage regulator, a larger storage battery, three additional outgoing 22,000-volt lines and switching, metering and control apparatus for this equipment.

Owing to war conditions it was impossible to obtain from Europe turbines similar to those originally installed to drive 1,410-kv-a. generators, but a turbine of double this capacity could be readily obtained in this country. Therefore, in June a contract was made with the Canadian Westinghouse Company for a horizontal direct-connected water wheel type generator of 2,820-kv-a., maximum rating, at 85 per cent. power factor, three-phase, 60-cycle, 4,000-volt, 720 r.p.m., with a 40 k.w., 125-volt, direct-connected exciter. Delivery is promised by February 1918, and the installation is to be made by the manufacturer.

A contract was placed with the Canadian Westinghouse Company for three 900-kv-a., 22,000/4,000-volt, single-phase, water-cooled transformers, identical with those of the original equipment. Installation to be made by the manufacturer.

A contract was also placed with the Canadian Westinghouse Company for the high tension and low tension switching and double bus equipment, switchboard panels, graphic meters, and a Tirrill voltage regulator. Installation is to be made by the manufacturer. The order for Weston indicating meters for the new switchboard panels was placed with A. H. Winter Joyner, Limited. The old bus system is to be changed over to a double bus system to correspond with the new installation.

Each generator, transformer bank or feeder, is to connect to its respective section of low tension or high tension double bus through its oil switch and a group of selector disconnecting switches.

Feeder oil switches are to be controlled by definite time overload relays and transformer oil switches by a system of differential relays. The generator oil

switches are non-automatic, but plans for a relay scheme to make them automatic are under consideration.

A control room is to be provided in the extension of the building and the existing switchboard panels are to be removed from their present location, and together with the new panels, installed in this control room.

An order has been placed for a 100-ampere-hour type "G-4" 100-cell Edison storage battery to replace the present 80-ampere-hour, 60-cell lead-battery for control operations.

Provision is being made for the future installation of a fourth generator, a third bank of transformers, two 22,000-volt lines, one 4,000-volt feeder, and a motor-driven exciter.

A total of eight 22,000-volt lines is, therefore, possible from this station.

Building Extension

To provide space for this new equipment and the changes contemplated, it was found necessary to extend the present building from approximately 39 ft. to 112 ft. in length and from 60 ft. to 69 ft. in width. The building will have concrete foundations, brick walls, and reinforced concrete floors and roof supported on steel work.

The change in width was necessary to accommodate the high tension double bus structure.

The contract for the steel was placed with the McGregor-McIntyre Company and for the pressed brick with the Inter-Provincial Brick Company.

The erection of the building is being carried out by the Commission.

The work is being pushed rapidly forward, and it is expected that the new equipment will be completely installed and ready for service early in the coming spring.

MUNICIPAL WORK

Chesley

Waterworks

About September 1916, the matter of pumping was first taken up here, and on October 3, 1916, instructions were received from the Town Council to investigate it. A report was made in November 1916, and on February 12th of this year two propositions were laid before the authorities, one embracing an estimate for a deep-well pump, capable of delivering 106 Imperial g.p.m. against a total head of 230 feet inclusive of 60 feet lift, driven by a 10 h.p., 3-phase, 220-volt, 60-cycle, slip ring motor with both hand and automatic starting equipment. The other being an estimate for a 150 Imperial g.p.m. rotary pump with a 20 h.p. motor, together with an air compressor driven by an electric motor.

On March 1st of this year instructions to order a pump in accordance with the first estimate were received and the order was placed the same day. The equipment was shipped at the end of April and was put into operation shortly after. The estimated saving, based on three months' operation, is $430 per annum, after allowing $251 annually to cover the increased capital charges.

Derby Township

Rural Power

A petition was received and estimates prepared and submitted in connection with a proposed extension from the Tara Station to serve thirteen farms in this district.

Kilsyth Distributing Station

In the last Report it was mentioned that the construction of a pole type distributing station was authorized at Kilsyth, and that a suitable design which could be standardized was being developed. This design has been completed during the past year, and a station constructed from this design. The equipment consists of a Hydro-Electric Power Commission air-brake switch to connect the station to 22,000-vole line, a 75-kv-a., 22,000/4,000/2,300/575-volt, 3-phase, 60-cycle, Moloney Electric transformer protected by Delta-Star 22,000-volt combined fuse and choke coil mounting and a delta-star arrester. The low tension equipment consists of two 4,000-volt feeders to Kilsyth and Tara, protected by 4,000-volt fuses and Garton-Daniel arresters. The metering equipment consists of Canadian Westinghouse Company "R.O." maximum demand meters with suitable instrument transformers housed in a corrugated metal building. It is expected that this station will be placed in service in December.

The construction of this station was done by the Commission. The switching equipment was ready for service the end of September, but owing to the transformer having been damaged during railway transportation, it had to be returned to the factory for repairs, which are not yet completed.

Durham

Cement Company's Distributing Station

During the year a contract was completed with the National Portland Cement Company for supplying 1,000 h.p. per annum to the company's plant at Durham.

Work instructions were received in September for the installation of a 1,000-kv-a. frequency changer set to change the frequency from 60-cycles to 25-cycles for supply of power to the National Portland Cement Company at Durham, Ontario. The equipment will consist of two Canadian Westinghouse Company "GA-3" 26,400-volt oil switches and two Canadian General Electric Company electrolytic lighting arresters, instrument transformers with overload and reverse power relays to protect two incoming 22,000-volt lines. Three Canadian General Electric 250-kv-a., 22,000/2,300/575-volt, 60-cycle, self-cooled transformers to be transferred from Port McNicoll (C.P.R.) Distributing Station will be used to step the voltage down to 2,300-volts to supply the 60-cycle motor on the frequency changer set. This frequency changer set will deliver power at approximately 600-volts, 25-cycles to the Cement Company's bus bars. This equipment will be installed in the space in the boiler room of the Cement Company's plant made vacant by the boilers being removed.

The frequency changer set was manufactured by the Electric Machinery Company of Minneapolis and was purchased by the Commission. Work is being started on the installation of this equipment by the Commission, which will install the entire equipment. It is expected that this station will be in operation the early part of 1918.

Elmwood

Distributing Station

The construction of a standard pole type distributing station at Elmwood was authorized in November and all equipment was ordered. The station will consist of Hydro-Electric Power Commission air-brake switch, 50-kv-a., 3-phase, 22,000/4,000/2,300/575-volt, 60-cycle, Moloney Electric Company transformer, delta-star fuses and choke coils. The metering equipment will consist of a Canadian West-

inghouse Company "R.O." maximum demand meter with suitable instrument transformers housed in a metal meter house to measure the power supplied to the Municipality over a 4,000-volt feeder.

The construction work will be done by the Commission.

Grand Valley

Distributing Station

The construction of a standard type "H" Distributing Station at Grand Valley with all equipment, as given in the last Report, was completed and put into service in August 1917.

The Municipalities of Grand Valley and Arthur were provided with temporary single-phase service from November 1916, until the new station was put in service.

Hanover

Enabling and money by-laws were submitted to and carried by the ratepayers of the town, authorizing the execution of an agreement with the Commission for a supply of power and providing for sale of debentures covering the cost of purchasing and reconstructing the distribution system. Agreements were also completed with the Hanover Electric Light Company covering the purchase of the company's properties inside the limits of the municipality and with the Commission covering the supply of power.

Assistance was given by the Commission's engineers in addressing public meetings and giving general information in connection with the by-laws, also in carrying on purchase negotiations with the Hanover Electric Light and Power Company. A distribution system was designed and the construction of same authorized.

An agreement was also executed between the Commission and the Hanover Electric Light Company covering the purchase of all properties belonging to the latter, located outside of the municipality, with the exception of Maple Hill development.

The load in this municipality has every prospect of being one of the largest in the district.

Street Lighting

To supply the street lighting circuit the purchase of a 12-kv-a., 2,200-volt, 6.6-amp., constant-current transformer and panel for same was authorized by the municipality and orders were placed with A. H. Winter Joyner, Limited, for an Adams-Bagnall transformer. The Canadian General Electric Company will supply the switchboard panel.

Temporary Distributing Station

Owing to the increase in load, the two 40-kv-a., 22,000/2,200-volt, single-phase, Canadian Westinghouse transformers were taken out of service in April and were replaced by two 125-kv-a., 22,000/2,200-volt, single-phase, Canadian Westinghouse transformers which were transferred from Orangeville Distributing Station. The 40-kv-a. units were later transferred to Alliston Distributing Station.

Permanent Distributing Station

In June, a standard type "G" station was authorized to replace the temporary station and the building contract was awarded to Wells & Gray, Toronto. The building was completed in September.

The electrical equipment in the new station will consist of three Canadian Westinghouse 125-kv-a., 22,000/2,200/500-volt, single-phase transformers, with the necessary high tension equipment for one incoming 22,000-volt, three-phase line, and the low tension equipment for two outgoing 4,000-volt, three-phase feeders, one to supply Hanover and the other to supply Neustadt, Carlsruhe and Ayton.

The 22,000-volt oil switch, lighting arrester and current transformers, were purchased from the Canadian General Electric Company, and the choke coils, disconnecting switches and insulators were purchased from the Canadian Westinghouse Company. All this high tension equipment will be installed by the Commission. All the low tension equipment, except the meters and Garton-Daniels lightning arresters, will be supplied by the Canadian General Electric Company, who will also make the complete low tension installation. The station wil be equipped with Weston indicating meters and Niagara Eectric Improvement Corporation watt-meters.

As the permanent installation cannot be completed till the first of the year, arrangements are being made to have the station put in temporary service by the Commission until the permanent low tension equipment is received.

Orangeville

Distributing Station

The new sub-station building referred to in last Report was finished. The new station was placed in service in February with temporary connections owing to failure of the 150-kv-a. Allis-Chalmers Bullock transformer, referred to in previous Report, using three 50-kv-a. transformers purchased from Moloney Electric Company, for the Shelburne Distributing Station, diverted temporarily to Orangeville. The damaged transformer was found to be not worth repairing, and was disposed of as scrap. One 125-kv-a., 22,000/2,200/550-volt, 60-cycle, transformer was ordered from the Canadian Westinghouse Company in January 1917, to complete the bank for this station, but following the failure above referred to, it was decided to duplicate the order, which was done in March.

Owing to release of three 150-kv-a. transformers from Midland Distributing Station, and the necessity for increased transformer capacity at Hanover Distributing Station, it was decided to transfer the three 125-kv-a. Westinghouse transformers from Orangeville Distributing Station to Hanover Distributing Station and to transfer the three 150-kv-a. Moloney transformers from Midland Distributing Station to the Orangeville Distributing Station. These 150-kv-a., 22,000/2,300/575-volt, 60-cycle Moloney Electric Company single-phase transformers were placed in service in Orangeville Distributing Station the end of April and the 50-kv-a. transformers thereby released from temporary service there were shipped to Shelburne Distributing Station at the same time.

The 22,000-volt electrolytic lightning arresters referred to in previous Report were placed in service the end of June. All details of the installation in Orangeville Distributing Station were completed early in September.

Alton Feeder

Work instructions were received for the installation of a 4,000-volt feeder in the Orangeville Distributing Station to supply power to the Village of Alton. This was accomplished by using one of the feeder panels transferred from Midland Distributing Station to Orangeville Distributing Station, as mentioned in last Report, and equipping this panel with a Niagara Electric Improvement Corporation

graphic maximum demand meter to measure the load. This work was completed by the Commission and put in service in March.

Street Lighting

The two 10-kv-a. constant current transformers and panels, referred to in previous Report, were installed in the Orangeville Distributing Station for the municipality by the Commission and were ready for operation the latter part of June.

Shelburne

Distributing Station

As stated in the last Report the original transformers were destroyed by fire while installed in the temporary building, and it became necessary to order new transformers and in the meantime carry the load with two 25-kv-a. Moloney transformers, which were intended for Coldwater Distributing Station. Since the last Report, the new three 50-kv-a., 22,000/2,300/575-volt Moloney transformers, which were temporarily used at Orangeville, were received and installed early in May by the Commission, and all work completed in this station, the high tension arresters being finally completed on September 1st.

Street Lighting

The street lighting equipment mentioned in last Report as being temporarily installed in the Town Hall was transferred to the distributing station and permanently installed.

WASDELL'S SYSTEM

TRANSMISSION LINES

The high tension lines, consisting of 1/0 aluminum were replaced with 5/16-inch, seven-strand steel from the generating station to Beaverton, and with ¼-inch, seven-strand steel from Beaverton to Cannington. A very considerable economy was effected by this change.

MUNICIPAL WORK

Beaverton

The installation of 22,000-volt lightning arresters in Beaverton distributing station was authorized in October 1916. It was decided to transfer the multi-gap Westinghouse arresters from Cannington distributing station. This work was done by the Commission and the arrester was placed in service in Beaverton distributing station in August.

Brock Township

Service extensions have been made, supplying light and power to farms out of Cannington, and on the Cannington-Woodville 4,000-volt line.

Cannington

As a 22,000-volt lightning arrester was required at Beaverton distributing station, it was decided to transfer the multi-gap arrester from this station to Beaverton distributing station, and to purchase an electrolytic type of arrester to replace it. Accordingly an order was placed with Canadian General Electric

Company on November 24, 1916, for an electrolytic arrester with accessories. This was shipped the latter part of June. Upon its arrival at Cannington, the Commission removed the multi-gap arrester from service and installed the electrolytic arrester, the work being completed on July 30th.

Gamebridge

Power was delivered to this hamlet from the 4,000-volt Brechin line in June 1917. One power, four commercial and four domestic services have been installed.

Kirkfield

Valuations were made and estimates completed on the construction of a 22,000-volt line from Gamebridge to the crushing plant at Kirkfield. Actual construction has been postponed until conditions become normal.

Raven Lake Portland Cement Company

A valuation and report was made on the Raven Lake Portland Cement Company's system, with the idea of purchasing it and supplying power to the towns of Kirkfield, Minden and others in the district. An industrial survey was made of the district to determine the probable load. It was found, however, that the loads would be too small to warrant anything being done in this connection.

CENTRAL ONTARIO SYSTEM

GENERAL

Rates

The Commission's standard forms of rates were placed in effect in all the municipalities on this system on January 1, 1917, these rates applying to Power, Commercial Lighting and Domestic Lighting. In almost all cases the new rates to consumers are lower than those in effect before operation by the Commission was begun. Street lighting rates were reduced in several municipalities. All flat rates have been abolished and replaced by standard meter rates. There are still a small number of power contracts in force embodying obsolete rates, but these are being replaced by standard contracts as rapidly as they mature.

General Stores Department

A general storehouse has been established in Belleville, in which is kept a stock of line material, wiring devices, fittings, transformers and motors. Material is requisitioned from this storehouse by the various local offices as required, thus permitting the reduction of local stocks to a minimum, and ensuring the benefits of quantity buying and prompt delivery.

Offices

A number of local offices were found to be quite unsuited for the business of an electric utility, and as leases expired, improved quarters were obtained. In equipping new offices every effort has been made to ensure the comfort and convenience of customers and staff, as well as to make possible the merchandising of appliances with the greatest efficiency. New offices have been so equipped at Port Hope, Cobourg, Brighton, Napanee and Lindsay with very good results.

Campbellford Pulp Mill

The operation of this mill has been continued by the Commission throughout the year. A supply of pulpwood for many years to come has been assured by the purchase of all the timber in the Township of Bruton in the County of Haliburton. In this limit there is a large supply of excellent spruce and balsam pulpwood as well as other timber. A number of camps are now operating in the Township, and it will not be necessary to purchase any further supplies from settlers as has been done in the past.

All the timber cut in Bruton Township will be driven down the York Branch of the Madawaska River and Baptiste Lake to Bancroft, where it will be taken out of the water and shipped *via* Canadian Northern and Grand Trunk Railway to Campbellford *via* Anson Junction.

The 600-ton pulp press has been completely installed, together with an intermediate pressure, triplex power pump, which make a full equipment of four presses and pumping plant, easily capable of producing 30 to 35 tons of air-dry pulp per day.

Estimates have been made on the cost of a two-machine news print mill and on the expansion of the present pulp mill to accommodate this equipment.

An accident occurred from the stripping of a thread in the flange clamping a grinder stone, which caused the shaft to move longitudinally together with the rotating parts of the attached 1,000 h.p. motor. The bearings were forced through the pedestals and caps, which were badly broken, one cap being in 15 pieces.

The pedestals and caps were shipped to Toronto, where they were pieced together, welded by the oxy-acetylene process, refitted to the bearings and returned ready for the motor within the time (about a week) required for the repairs to electrical connections on the motor.

Spare Transformers

One 750-kv-a., 44,000/2,400-volt, 3-phase, 60-cycle, oil-insulated, water-cooled transformer, and two 300-kv-a., 44,000/2,400-volt, 3-phase, 60-cycle, oil-insulated, self-cooled transformers were ordered on December 14, 1916, from the Canadian General Electric Company, to be used as spare units on the Central Ontario System. Tests on these were witnessed at the factory by the Commission's inspector. One of the 300-kv-a. transformers was installed by the Commission at Madoc sub-station and the other at Port Hope sub-station. The 750-kv-a. unit is held at the Canadian General Electric Company's factory for the present.

POWER CONSTRUCTION

Auburn Generating Station

The feeders across the Otonabee River to the lines to Peterboro and the Auburn Woollen Mills Company were rebuilt of heavier material to replace the old river crossing which was getting into a dangerous condition. A feeder panel, metering, equipment, switches, and a lighting arrester were installed to take care of service to the Auburn Woollen Mills Company.

Fenelon Falls Generating Station

Arrangements have been made and a contract proposed under which the Light and Power Commission of Fenelon Falls will sell to the Commission all the

surplus power from the municipality's Generating Station. The old 11,000-volt air-blast transformers in the Commission's Generating System at Fenelon Falls will be discarded and new water-cooled transformers installed to step up the voltage from 600 to 44,000 volts, at which voltage energy will be transmitted to Lindsay.

Oil switches have been installed to replace the old knife switches which were not suitable for operation under present conditions and synchronizing equipment was also installed so that the plant could be synchronized with the rest of the system.

New meter equipments have been supplied, so that complete records of the power generated at this point could be obtained.

In order to permit of a higher voltage transmission to Lindsay, the existing double circuit 11,000-volt line will be converted into a single circuit 44,000-volt line.

Healey Falls Generating Station

The load demands on the Trent River power system made it necessary, in January 1917, to consider extensions to the Healey Falls plant, which is located on the Trent River, about six miles from Campbellford. The Healey Falls Generating Station was originally designed for the installation of four 5,600-brake h.p. turbines, of which two were erected in the completed power house building.

It was decided to install a third penstock, a third unit of the same capacity as the old units (3,750-kv-a., 6,600-volt, 60-cycle, 3-phase, 240 r.p.m., waterwheel type horizontal shaft generator), and to complete the tailrace excavation for the final development.

In May the contract for a steel penstock about 460 feet in length and twelve feet in diameter was let to the Dominion Bridge Co., of Montreal, erection to commence in December 1917. A contract was also let at the same time for a 5,600 h.p. turbine, a double runner, cylindrical casing running at 240 r.p.m., under 72 feet head, to the Wellman-Seaver-Morgan Company, at Cleveland, delivery in February 1918.

Progress on these two contracts has been satisfactory, and it is expected that they will be ready at the required dates of delivery.

Early in June 1917, work was started on the excavation for the penstock line. This was completed in July. Arrangements were made with the Dredging and Dock Company in September for the rental of their dredge, scows and tug for use in removing the excavation for the tailrace and dredging was begun about September 8th.

The amount of material to be moved, most of which is rock, below water level, is about 30,000 cubic yards. This yardage removed to October 31, 1917, is approximately 12,000 cubic yards. It is expected that the balance of this material will be removed before the new unit is ready for operation, and that the new penstock together with the turbine unit will be completed about April 1918.

A contract was awarded March 15, 1917, to the Swedish General Electric Company for one 3,750-kv-a., 6,600-volt, 60-cycle, 3-phase, 240 r.p.m. waterwheel type horizontal shaft generator to be shipped from their factory in Sweden in March 1918, and installed in Healey Falls Generating Station, at the earliest possible date thereafter. The order for the complete switching and metering equipment necessary to place this generator into service was awarded to the Canadian Westinghouse Company, March 17, 1917, for shipment in January 1918. The manufacture of both generator and switching equipment is proceeding and shipping promises will be met.

On account of the expense of getting coal to Healey Falls, it was decided to install electric heaters, which, with the radiation from the machines, will serve to keep the power house at a comfortable temperature.

The switchboard gallery has been enclosed by a metal partition, ordered from the A. B. Ormsby Company on April 21, 1917. The erection of this was completed in October. This will allow the gallery to be heated to a higher temperature than the rest of the power house without the expenditure of too much power.

The generator pits, transformers, pockets and switching galleries have been painted with white enamel, which considerably improves their appearance.

On account of the difficulty of taking care of the operators at this point, it has been necessary to build a new operator's house, which is a duplicate of that constructed at Napanee.

In April a short study was made of applying electrical operation to the 12 by 12 ft. penstock butterfly valves, but the matter was referred to the Hydraulic Department for further information.

On July 28, 1917, orders were placed with the Mechanical Appliance Company and the Canadian Blower and Forge Company for two motors and two fans respectively to assist in the ventilation of the generating station. It is expected that these will be installed early in 1918.

Seymour Generating Station

Old and inadequate switching equipment on lines K. and G. was replaced by C.G.E. Type K 10, 44,000-volt, automatic circuit breakers.

Two generators which were burned out by lightning have been rebuilt complete. One of them is still out of service, but will be ready shortly. No reduction in the output of the system was caused on account of the failure of these machines. A new storehouse has been built to replace the old one, which was inadequate and in a poor state of repair.

Sydney No. 2 Transforming Station and Generating Station

On account of the difficulty of obtaining and keeping help at Trenton, which is caused by the lack of necessary accommodation, it has been found advisable to build an operator's cottage, similar to the one erected at Napanee, and a large house which will be used as a boarding house for our unmarried operators and for the accommodation of maintenance and construction men working at this station.

New equipment has been installed in the transforming station to accommodate the line from Healey Falls, which will be put into service at an early date.

The parapet wall around the roof of the transforming station had to be removed on account of the damage caused by water leaking down through the coping. It was decided on account of other experiences with this type of roof to change the style and to use a flat roof all round.

A new type H.3 automatic, electrically operated, circuit breaker was purchased to take care of the new feeder to Trenton.

Sydney No. 5 Generating Station

The original switches on the switchboard at this place were found to be too small and have been replaced by heavier types of equipment.

Minor changes have also been made in the wiring, and some of the equipment has been rearranged to give increased clearances.

TRANSMISSION LINES

It was thought advisable to commence replacing a number of old insulators with new units, a number of which were erected during the year. All new insulators have been put up on wood pins so as to increase the safety factor of insulation.

The old line, no longer in use, between the Auburn and Otonabee Generating Stations, was dismantled and over 13,000 pounds of copper recovered.

The aluminum conductor on the Millbrook tap was replaced by iron wire, which is ample to handle the load at this station. A reasonable profit on the transaction has been effected. The 44,000-volt tap from the main line to the Deseronto sub-station was moved from its old location in order to provide a clear space for the Aviation Camp established at Deseronto.

A 44,000-volt wood pole transmission line has been constructed from Healey Falls to Trenton *via* Campbellford in order to make available the new 3,750-kv-a. unit at the generating station. This line is connected to the 44,000-volt transmission system at the switching station located at Dam No. 2, Trenton.

MUNICIPAL WORK

Belleville

An electrically-driven pumping plant will shortly be completed for the water supply of the city, replacing two steam units and one electric unit of old design. The building has been enlarged for the reception of the new plant, which will consist of one 780 Imperial gallons per minute, 2-stage, turbine pump with 100 h.p. motor, two 1,250 gallons per minute pumps each with 125 h.p. motor, and one 1,560 gallons per minute pump with 150 h.p. motor, operating against 250 feet total head for domestic service, the same pumps delivering 500, 750, and 1,000 gallons per minute respectively against 325 feet head for fire service.

The pumps are of standard De Laval construction, each unit consisting of two double suction single stage pumps connected in series. Current will be supplied by two sets of transformers mounted on a pole structure outside the pump-house, with the usual switches and other equipment, each set of transformers being served by a separate transmission line.

Bloomfield

Enabling and money by-laws were passed by large majorities on August 31, 1917. A number of petitions have been received from farmers in the surrounding district for a supply of light and power. It is proposed to serve the municipality by a 4,000-volt line from a pole-type sub-station at Wellington.

Bowmanville

The telephone line from Oshawa to Trenton was looped into Bowmanville sub-station so that the line could be sectionalized there in case of trouble.

Brooklin

In connection with the Whitby Township rural extensions out of Oshawa, the village of Brooklin has applied for light and power, and service will be given early in 1918. An efficient system of ornamental series street lighting is being installed under the supervision of the Commission.

Power will be transmitted from Oshawa at 4,000 volts over a single-circuit line of No. 6 copper.

Cobourg

Street Lighting

The Commission has installed a new street lighting system in Cobourg, the work being completed on June 16, 1917. The circuits and poles of the old system were rearranged and put in good order, and the 35 enclosed arc lamps and 75 incandescent lamps of 80 c.p. each, were replaced by gas-filled lamps in modern fixtures. The residential districts are now lighted by 301 units of 100 watts each, and the business district by 17 units of 500 watts each. The arc light regulator was replaced by two constant-current transformers, each of 25-k.w. capacity.

Waterworks

The new waterworks intake and suction well was completed before hard weather set in last winter, and trouble from frazil ice and turbid water previously experienced have completely disappeared.

A new design of automatic coagulant and chlorine feed apparatus has been installed, and is operated by a turbine in the intake. This turbine utilizes the velocity head only, whereby correct distribution of the chemicals at all times is obtained in proportion to the quantity of water flowing to the suction well, which varies from 300 to 1,800 gallons per minute for domestic consumption.

The first unit of a pair of gasoline-driven fire pumps has been connected up to the city mains and is ready for testing. Each unit will deliver from 1,000 to 1,200 gallons per minute, and special precautions have been taken to avoid fire in the station, by placing auxiliary gasoline tanks and gasoline pumps outside the building, with tell-tales and extension pump shafts within the pump house, convenient for operation.

Deloro

The sub-station switchboard wiring has been revised in accordance with modern practice. Old graphic meters have been replaced by new equipment which will allow a more accurate determination of the load.

Edwardsburg Township

Petitions have been received from a number of farmers in this township asking for estimates on the cost of rural power. These estimates have been submitted to the township authorities for consideration.

Hallowell Township

Petitions have been received from several sections of the township for a supply of rural power.

Kingston

In December 1916, a contract for a supply of 1,200 h.p. to be delivered from the Commission's Central Ontario System was ratified by the local commission, and later passed by the council.

Preparations were at once begun on the construction of a 44,000-volt transmission line between Napanee and Kingston. In April 1917, the Commission was authorized to design and supply electrical pumping equipment for the city.

It is expected that the load will be over 1,500 h.p. An annex has been built to the present pumping station intended to conveniently accommodate a motor-

operated plant sufficient for future requirements of the city and one unit of 3,500 imperial gallons per minute.

Distributing Station

Arrangements having been made by the Commission with the Kingston Civic Utilities by which a portion of their steam power plant building, with certain necessary alterations, could be made use of as a distribution station, plans and specifications for the reconstruction work were prepared and contract awarded to Mr. R. N. MacFarlane, contractor, Kingston.

Two 750-kv-a., 44,000/4,160/2,400-volt, three-phase transformers were ordered from the Canadian General Electric Company on December 3, 1916, and a third similar transformer on March 17, 1917.

Existing stock orders were made use of to obtain quick delivery on a Canadian Westinghouse type "GA-3," 44,000-volt oil switch and a Canadian General Electric 44,000-volt electrolytic lightning arrester. The contract for the remainder of the electrical equipment, including low tension switchboard, was awarded the Canadian General Electric Company.

The alterations to the building were commenced on August 13th, and the first transformer will be delivered about December 1st.

Waterworks

An annex has been built to the present pumping station intended to conveniently accommodate a motor-operated plant sufficient for any future requirements of the city, and one unit of 3,500 imperial gallons per minute capacity is nearly ready for installation. This unit will operate against a head of 210 feet, and consists of a 12-inch double suction, single-stage DeLaval turbine pump, connected through a flexible coupling to a C.G.E. synchronous motor of 380-kv-a. at 1,200 revolutions per minute, with the usual exciter and switchboard equipment.

A 24-inch steel suction pipe is connected to the present intake pipe at a point about 150 feet from the pump-house, and is of a temporary nature, consideration having been given to the construction of a suction well in connection with a new intake, low-lift pumping and filtration system.

The discharge from the pump is connected to a new 24-inch main fitted with recording Venturi meter.

Lindsay

Plans and estimates were drawn up for an extension of the White Way on Kent street in this municipality.

Madoc

Totalizing current transformers have been installed so that a record can be kept of the summation of loads supplied from this station. A 300-kv-a. oil-insulated, self-cooled, 3-phase, 60-cycle, 44,000-4,160-volt transformer was installed to provide standby equipment needed on account of the existing apparatus being fully loaded. New metering equipment was installed for various consumers in the district about Madoc.

Napanee

The approval of the Municipal Council was secured for the dismantling of the steam generating plant and the boilers, and most of the machinery has been disposed of by sale.

The connections in Napanee sub-station have been changed over from 2,400 volts to 4,160 volts, enabling power to be fed over the new line to Newburgh and Camden. The feeder panel and metering equipment were installed to accommodate the Newburgh and Camden feeder, and a blank panel was provided to fill the remaining vacant place in the board.

On account of the construction of the line from Napanee to Kingston, it has been necessary to build an operator's house at Napanee sub-station. A five-room house was erected and provided with all modern conveniences, including electric heating. The operator living at this point will attend to the switching on the Kingston line, and the regular patrol of a section of the line, besides taking care of the sub-station.

Omemee

The construction of a pole-type distributing station at Omemee was authorized and three 40-kv-a., 44,000/2,400-volt, 60 cycle, single-phase, outdoor-type transformers were ordered from the Moloney Electric Company on May 4, 1917. Drawings were completed and balance of material required was ordered.

The station will be of the outdoor type with 44,000-volt disconnecting switches, choke coils and fuses, and with the 4,000-volt oil switch and the metering equipment including a General Electric graphic recording wattmeter, placed in a small galvanized iron kiosk.

Owing to commercial conditions the transformers were not shipped as early as promised, but it is expected that this station will be ready for service about January 1, 1918.

A new street lighting system is being installed in Omemee under the supervision of the Commission.

The installation of the necessary transforming equipment, transmission line and distribution system has been practically completed, and power will be turned on from the Central Ontario System early in 1918.

Current will be delivered to the municipality at a pressure of 4,000 volts from the Commission's pole-type sub-station one mile north of the village limits.

Oshawa

A Diesel engine-driven generating unit, formerly used as a reserve source of supply, has been sold, as its capacity was too small to be of material value in case of an interruption to the 44,000-volt supply. It is intended to construct a second 44,000-volt line to Oshawa as soon as normal construction costs again prevail. The 1,200-k.w. generator, formerly in the Otonabee Generating Station, is being installed at Oshawa for power factor correction and voltage control.

Peterborough

Requests have been received from the Peterborough utilities system to prepare plans for a new sub-station. It is intended to proceed with the construction of this building during the summer.

Gas Works

A contract was let to the Economical Gas Apparatus Construction Company in April 1917, for the supply and erection of a second carbureter-super-heater, washer, oil-heater, scrubber, water-cooled tubular condenser, oil pumps and accessories, complete with piping and connections, at a price of $10,263, to be used in

connection with a new generator, which was furnished by the William Hamilton Company.

Pickering Township

Requests and individual contracts for a supply of light and power have been received from the Hamlet of Greenwood. It is proposed to serve this section over a 4,000-volt line from Brooklin.

Requests have also been received from Pickering Village and an investigation of the probable requirements for this section has been made.

Picton

Following the urgent request of municipalities in Prince Edward County, estimates were prepared early in the year on the costs of a supply of power from the Central Ontario System.

Enabling and money by-laws were passed by very large majorities on August 31st. It is proposed to serve this town over a 4,400-volt, single-circuit line from Trenton. Power will be delivered to the municipality at 2,300 volts, from the Commission's sub-station within the town. The present 2,300-volt, 3-wire, 2-phase line will be rearranged for 2,300-volt, 3-phase operation. An electrically-driven, centrifugal pump will be installed in the local pumping-station under the direction of the Commission.

Estimates have been prepared and tentative designs made for a distributing station for Picton: also prices have been obtained for the necessary transformer.

Port Hope

Electric heaters were installed at the sub-station and have been very satisfactory. It was unnecessary to use any coal for heating purposes during the last winter, which allowed a substantial saving to be made. A flying panel was installed in the switchboard to fill a vacant space caused by a feeder panel being removed to another station.

A 300-kv-a. oil-insulated, self-cooled, 3-phase, 60-cycle, 44,000/2,400 and 4,160-volt transformer was installed to replace the 750-kv-a. unit moved to Oshawa last year. This increased the capacity of the Port Hope sub-station to 1,050-kv-a.

Work was commenced on changing over the high tension line entrances from roof to wall type, the roof bushings having been found unsatisfactory and a hazard to service.

Waterworks

A report has been made on the waterworks pumping system of the town, wherein it was shown that considerable saving would be made by electric pumping in place of steam pumping under normal conditions of fuel cost, and proportionately larger saving under present coal prices.

Port Perry

Several resolutions and requests have been received for estimates on the cost of a supply of power. Estimates are being prepared on power at 4,000 volts from Oshawa *via* Columbus.

Sulphide

Graphic reactive volt-ampere meters were installed to replace the power factor meters which were not accurate enough on such an important load.

Part of the switchboard was destroyed by lightning and arrangements have been made to install more up-to-date equipment and to rebuild the switchboard room to provide more adequate clearances.

Authorization has been given to proceed with the design of an extension to the Sulphide distributing station, including switching equipment to replace that recently destroyed by fire. The preliminary work is under way.

Trenton

A report was prepared for the municipal council on an ornamental street lighting system for the main business streets.

Negotiations have been carried on between the Commission and the municipal council leading toward the sale of the local waterworks of the town.

The power load in Trenton has increased very largely owing to the operations of the British Chemical Company. This plant has a demand of 4,500 h.p. and is supplied by a 6,600-volt line from the generating station at dam No. 2.

A 750-kv-a., 3-phase, 60-cycle, 6,600/4,160-volt transformer was installed at Trenton sub-station, to relieve the old 100-kv-a., self-cooled units which were loaded beyond their capacity.

An additional constant-current transformer was also installed to take care of the increase in the street lighting load, occasioned by the industrial activity of the town.

Another circuit of No. 0000 aluminum was run from Trenton sub-station back to the terminal transforming station at dam No. 2, to take care of the increased load and to insure uninterrupted service.

Work is proceeding on the design of a sub-station at Trenton for distributing power received from the Sidney Power House. This station is to replace the present one which is inadequate. One 750-kv-a., 6,600/2,400/600-volt, 3-phase, 60-cycle transformer has been ordered from the Canadian General Electric Company so as to meet the increased requirements.

Uxbridge

Several requests have been received from the town officials for estimates on the cost of a supply of power. Up to the present no suitable scheme has been devised for serving this district from Hydro lines as at present constructed.

Wellington

Acting on the urgent request of the village officials, estimates were made on the cost of a supply of power from the Central Ontario System. A valuation was also made of the local privately-owned plant, and negotiations opened whereby the municipality will take over the present distribution system and remodel it to suit modern requirements.

Enabling and money by-laws were passed by very large majorities on August 31st.

It is proposed to serve this village, together with Bloomfield, from a pole-type, step-down station at Wellington.

Estimates have been prepared and tentative designs made for a distributing station for Wellington, and prices have also been obtained for the necessary transformer.

Whitby Township

Petitions were received from a large number of farmers and hamlet residents in the township, and construction of rural lines approved by the township council after estimates were submitted by the Commission.

Lines are being constructed from Oshawa to Brooklin and Columbus, power being delivered over a 3-phase, No. 6 copper, 4,400-volt line. Twenty-two farms, as well as the hamlets of Brooklin and Columbus, will be served by this extension.

MUSKOKA SYSTEM

POWER CONSTRUCTION

South Falls Generating Station

The Commission's reports for 1915 and 1916 describe the taking over of this plant from the Municipality of Gravenhurst, and the changes and additions made in its equipment. This plant is located on the south branch of the Muskoka River, about three miles from the Town of Bracebridge, and is at present supplying energy to the Municipalities of Gravenhurst and Huntsville.

In addition to the work noted in the Commission's Report for 1916, the highway road was raised to permit using the maximum headwater level on the plant. This work was completed in November 1916.

Concrete saddles were placed under No. 1 steel penstock, loose earth and debris were removed, and the pipe was scraped and painted.

The final coat of paint was placed in the spring.

The old turbine was overhauled in December and work was practically completed in the same month. The governor supplied by the turbine manufacturer for the new machine, did not prove satisfactory under service conditions, and in February 1917, it was decided to order its removal and to have another type of governor installed. Due to the abnormal market conditions the new governor has only recently been delivered, and is not yet installed, but more efficient operation and better regulation will undoubtedly result when it is put into service.

On November 23d an order was placed with the Canadian General Electric Company for one 12-k.w., 125-volt, inter-pole compound wound, 1,800 r.p.m. exciter, complete with slide rails. This exciter will be belt-driven from the 750-kv-a., 720 r.p.m. generator. A 14-inch pulley with 6-inch face was supplied and installed on an extension of the shaft of the 750-kv-a. generator. This exciter is intended for emergency operation only.

On January 4th an order was placed with the Canadian General Electric Company for two 16-inch by 90-inch black slate panels complete with framework, small wiring, test link panels, etc., also for two 100/5 ampere, 6,600-volt current transformers. One panel is for the purpose of mounting one Westinghouse graphic recording wattmeter and one Westinghouse graphic recording power factor meter for the Gravenhurst feeder. The other panel is for mounting the Westinghouse graphic recording wattmeter and one Esterline graphic recording voltmeter, which record the station load and voltage. The current transformers were supplied to replace the present transformers on the 450-kv-a. generator in order to have them the same as those on the 750-kv-a. generator for the purpose of paralleling same on the station wattmeter. This equipment has been delivered at the station and will be installed early in November.

On July 10th the order was placed with the Canadian General Electric Company for one type "Ta-110" form "K-5" Tirrill Voltage Regulator with panel, with accessories. This regulator with panel is expected to be ready for shipment from the factory of the Canadian General Electric Company's Peterboro plant in December.

Gravenhurst

An additional power load of 250 h.p. has been secured from the National Potash Corporation. A single-phase induction regulator is being installed on the lighting feeder to improve voltage conditions.

Huntsville

A large number of meters, which had formerly been used on 133-cycle current, were rearranged at the Commission's laboratories for 60-cycle service.

A 75 kilowatt stand-by generator was purchased through the Commission in July 1917. This has been installed in the town's generating station.

Distributing Station

Although this station was placed in service during the month of August 1916, the Canadian General Electric Company did not complete the installation of equipment until January 1917.

Stephenson Township

Estimates are being prepared on the cost of supplying the Hamlets of Utterson and Port Sydney with light and power. It is proposed to install a single-phase, pole-type sub-station in Utterson, to transform the current from 22,000 to 2,200 volts, for distribution to the villages.

ST. LAWRENCE SYSTEM

GENERAL

Numerous requests have been received by the Commission asking for investigations of the possibilities of supplying light and power by means of hydro-electric systems, and in such cases the Commission has obtained the necessary information. Estimates have been prepared showing the prices at which power could be supplied to the municipalities and these have been forwarded to the municipalities in question.

Engineering assistance has also been given to a great many of the operating towns on matters connected with rate application, economical operation of local systems, and in increasing the light and power business.

TRANSMISSION LINES

The 3/0 aluminum lines between Morrisburg and Winchester were replaced by 5/16-inch, seven-strand steel. A considerable reduction in the fixed charges on this section of the system was thus effected.

STATION CONSTRUCTION

Cornwall Transformer Station

Instructions were received in August 1917 to proceed with the design and purchase of material for a transformer station, to be located at or near Cornwall. This station will receive power at 110,000 volts, 60-cycle, from the Cedar Rapids Transmission Company and transform to 26,400 volts for distribution through the eastern district. Plans are now being prepared for this station.

MUNICIPAL WORK

Brockville

Negotiations have been carried on during the year for an additional supply of power for the St. Lawrence System. It is proposed to construct, early in 1918, a transmission line between Cornwall and Morrisburg to transmit power to this system from the lines of the Cedar Rapids Transmission Company. Power will be taken at 110,000 volts and stepped down to 26,400 volts for transmission to Brockville and other towns on the system.

Chesterville

A very satisfactory increase in the power load has been brought about by the addition of the Maple Leaf Condensed Milk Company's power requirements.

OTTAWA SYSTEM

MUNICIPAL WORK

Ottawa

Estimates were prepared on the cost of heating the new Parliament Buildings by electric power.

Requests were received from the local Hydro-Electric Commission for an additional supply of 2,000 h.p. for the new Lemieux pumping station. This additional power was procured from the Ottawa and Hull Power Company, on the existing contract between the company and the Commission.

RIDEAU SYSTEM

MUNICIPAL WORK

Almonte

The reconstruction of the distribution system was completed in February 1917. The new unit has given the best of satisfaction and a considerable addition has been made to the power load.

Exhaustive investigations have been made throughout the year with a view of co-ordinating all the power sites in the town under a single efficient development.

The construction of the new street lighting system, under the supervision of the Commission, was completed. The system was placed in operation on February 13, 1917. The system includes 106 units of 150 candlepower and 26 units of 400 candle-power, all of which are of the bracket type, mounted on wood poles. The

lamps, which are nitrogen-filled, are operated on a 6.6-ampere, series circuit, which is regulated by a 25-k.w. constant current transformer.

Carleton Place

The town council on June 14, 1917, passed a resolution requesting estimates on the cost of Hydro power. Negotiations are at present under way, with a view to the purchase by the town of the present distribution system.

Kemptville

Resolutions were received in August 1917, from the Village of Kemptville, requesting an estimate on the cost of 100 h.p. Exhaustive investigations were carried out by the Commission, with a view to including this village in a comprehensive system for the eastern district.

Lanark

Resolutions requesting an estimate on the cost of a supply of light and power were received from the town officials. It is proposed to include this town in the Eastern District system mentioned in the foregoing item.

Merrickville

Arrangements have been completed providing for the purchase of a supply of power from the Rideau Power Company, at Merrickville, for transmission to Smith's Falls and the surrounding district. Power will be stepped up from 600 volts to 26,400 volts, at the Rideau Power Company's power stations, and transmitted over a single-circuit, 5/16-inch steel line. Power will be delivered to Smith's Falls early in 1918.

Rideau Power Company

At the request of this company engineering assistance in connection with the design of a transformer installation in the company's generating station at Merrickville was authorized in October 1917. Tenders were drawn up calling for three 250-kv-a., 600/26,400-volt, 60-cycle transformers. Plans are now being considered.

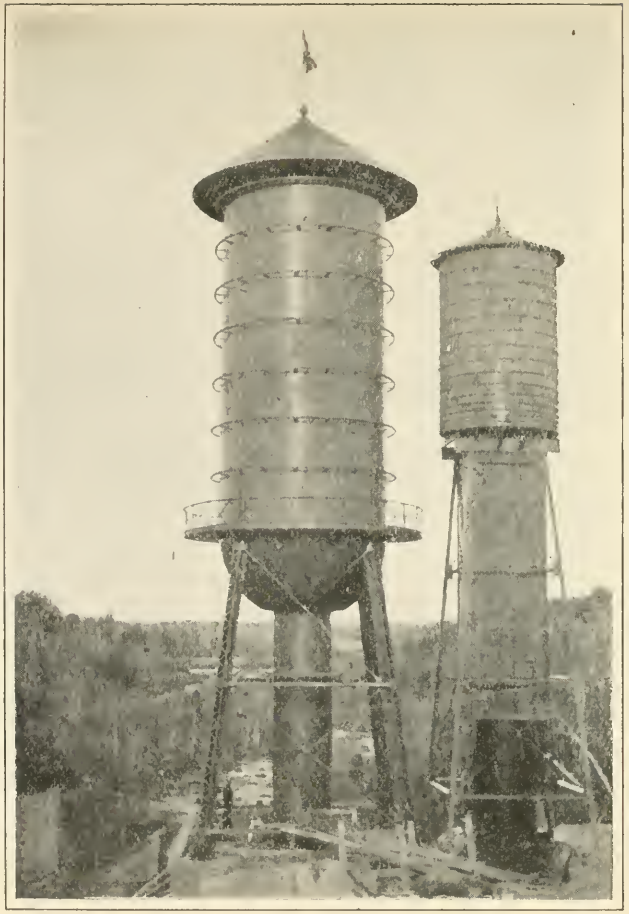
Perth

At the request of the town officials, valuations were made of the existing power-plant, distribution system and waterworks, equipment by the Commission. Negotiations were begun, which led to the purchase of these utilities by the municipality.

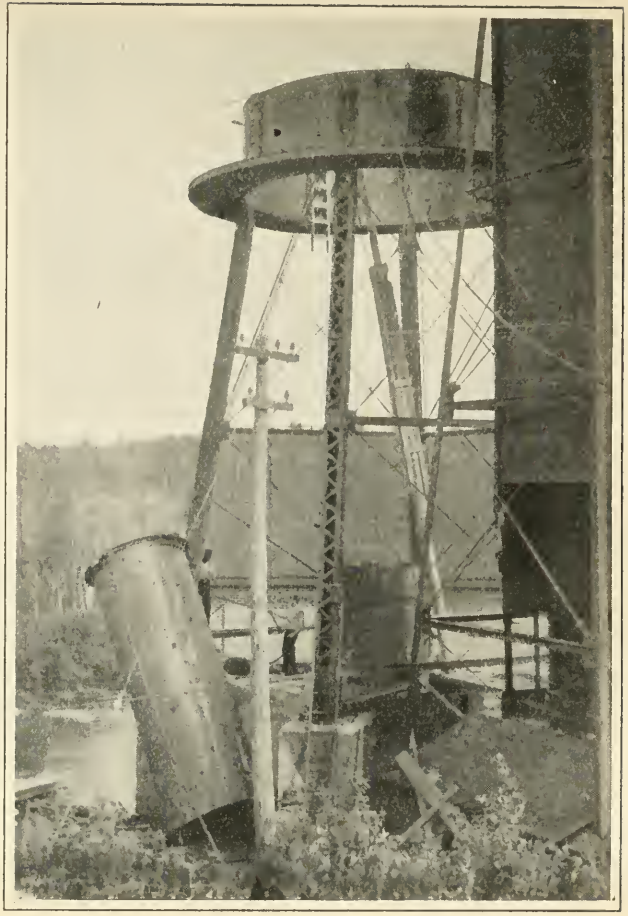
Enabling and money by-laws were placed before the electors on August 28, 1917, and passed by large majorities. The town will operate the utilities with the present steam and water powers until the Commission's lines are completed from Merrickville.

Distributing Station

A sub-station to distribute power for Perth is being designed, to receive power from Merrickville. One 750-kv-a., 44,000/25,300/4,160/2,400/600-volt, 60-cycle, 3-phase, O. I. W. C. transformer for this station has been purchased from the Canadian General Electric Company.



Surge Tank at Nipissing Completed with Exception of Frost-proof Lagging.



Surge Tank at Nipissing During Construction.

Smith's Falls

Exhaustive investigations have been carried on throughout the year to secure the best means of supplying Smith's Falls and adjacent towns with an adequate amount of light and power. Arrangements have been completed, by which a supply sufficient for present needs will be purchased by the Commission from the Rideau Power Company, at Merrickville and transmitted to the towns over a single-circuit, 26,400-volt line.

Valuations were made by the Commission of the two existing plants and distribution systems in the town, and negotiations completed whereby these utilities are to be taken over and operated by the municipality as a single system. Enabling and money by-laws were passed by large majorities on August 23, 1917, and construction was begun immediately. It is expected that power from Merrickville will be turned on in Smith's Falls early in 1918.

Distributing Station

Work is proceeding on the design of a sub-station at this point to distribute power received from local generating stations and from the Rideau Power Company at Merrickville. One 750-kv-a., 44,000/25,300/4,160/2,400/600-volt, 60-cycle, 3-phase, O. I. W. C. transformer has been ordered from the Canadian General Electric Company for this station.

NIPISSING SYSTEM

POWER CONSTRUCTION

Nipissing Generating Station

A new differential surge tank of steel has been installed in order to improve the speed regulation of the turbines and to reduce water surges in the pipe-line. The old tank was of wood and was in a poor state of repair. It will be removed from service in the spring. The new tank was supplied by the Canadian-Chicago Bridge and Iron Company in January 1917.

About 260 yards of concrete were placed. The new tank has a diameter of 18 feet, the gallery is 32 feet above the foundations, and the cylinder is 46.5 feet high, making an overall height of 72.5 feet.

The tank and riser are housed with a double layer of ship-lap with building-paper between, and four 10-k.w. heaters provide the necessary warmth to prevent freezing.

At the date of this report the new tank has not yet been placed in service. Preparations are being made to do so immediately.

Generator No. 3 developed trouble in the windings, and it was decided to have it removed. This work has been completed.

A modern septic-tank and sewage-disposal plant was installed at the power-house.

Preparations have been made for the installation of a storage dam in the vicinity of Cox Chutes, on the South River, as soon as the prices of materials and labor return to normal. All the necessary land has been secured.

MUNICIPAL WORK

North Bay

Plans and estimates were prepared for a new storehouse at North Bay, but it was decided to postpone the erection of this building until a later date.

A new stack was purchased and erected on the North Bay steam plant for No. 2 boiler, and another stack will be replaced as soon as it can be fabricated.

A new generator is being purchased to replace the one recently burned out, and it is expected that a number of changes will be made in the steam plant in order to increase its capacity and efficiency for stand-by service.

Considerable additional load in motors has been secured and the sale of electric ranges and appliances has been exceptionally good.

Powassan

A set of three-phase, Delta Star lightning arresters were installed at the Powassan station as a protection to the high tension transformers. A three-pole air-brake disc switch was also installed.

PORT ARTHUR SYSTEM.

MUNICIPAL WORK

Fort William

On January 1, 1917, by a vote of 700 for to 71 against, the ratepayers of Fort William expressed their approval of making a power agreement with the Commission. This by-law, however, was so drawn that it was necessary for the ratepayers to vote on the actual power agreement after it was submitted. This was accordingly done and on September 19, 1917, by a vote of 548 for to 82 against, the ratepayers approved of the new power agreement between the City of Fort William and the Commission. This agreement will take care of the city's power requirements after the expiration of the city's present power agreement with the Kaministiquia Power Company, or should the city desire to do so, it will provide power from the Commission in excess of that required to be taken from the Kaministiquia Power Company.

Port Arthur

On January 1, 1917, the ratepayers voted 712 for to 22 against, making a new power agreement with the Commission. Later in the year the new power agreement was accordingly executed with the City of Port Arthur. The old power agreement with the City expires early in 1920, and the new agreement is to provide for the continuation of a power supply through the Commission and to take care of the growth in power demand in Port Arthur and the vicinity.

SECTION V

GENERAL ACTIVITIES OF THE COMMISSION

ELECTRICAL INSPECTION

At the close of the last fiscal year the Commission's electrical inspection work had not been extended to all points in the Province, there being a few outlying districts in which it had not been found possible to secure suitable inspectors. As pointed out, the amount of work which would be involved in some of these small districts, would not warrant the expense of placing an inspector there, as only a small portion of his time would be occupied. The Commission has endeavored to locate suitable men for inspection duty in these places, and efforts have been made to secure men who are otherwise occupied, and who possess sufficient knowledge of the work to enable them to be trained in the duties of inspectors. The points referred to were the Sault Ste. Marie, Kenora, and Haileybury districts. The Commission has been able to secure suitable inspectors at these points, and their work has been commenced.

At the close of the last year the entire inspection system comprised 370 municipalities. This has now been increased to 501, so that there is practically no section in the Province without electrical inspection. By a rearrangement of the different inspection districts a continuous chain of offices has been established, thus placing every section of the Province in some inspection district. Inspection work is being handled throughout the Province with dispatch and uniformity.

During the past year there have been recorded 113,863 inspections, an increase of 13,076 over the year 1916. These figures do not include various other inspections of old installations and other separate inspections which were made by the Commission in the course of the year.

Reference was made in the last report to the overlapping of the Power Commission Act and legislation governing the Theatres, Cinematographs and Mining Departments respectively. During the past year the Rules and Regulations of the Commission and the Theatre Departments have been adjusted in a manner entirely satisfactory to both bodies, so that all confusion which may have been caused by the overlapping of these Acts has been entirely eliminated. However, legislation affecting the Department of Mines still conflicts with the Power Commission Act.

Shortly after the Commission had appointed inspectors for the Cobalt district a canvass was made of the mines in this and other districts, with the result that the majority of these mines entered into contracts with the Commission to perform a monthly inspection in their mines in accordance with the factory inspection system which was inaugurated last year. The Commission's inspectors reported that there was much dangerous and defective work in these places, but shortly after the work of inspection was begun it was necessary to abandon it, owing to the fact that these mines were already subject to inspection by the Department of Mines, and the Commission's inspection would impose what was considered to be another unnecessary inspection upon the mines.

This Annual Inspection Contract System was referred to in last year's Report. At that time it had just been inaugurated. This system has proved exceptionally satisfactory, and the Commission has at the present time 389 annual inspection

contracts, the annual fees for which amount to $12,021. It has been found in practically every instance that mine owners are willing to enter into these agreements with the Commission. The only objection has been that there were two Acts governing the same inspection.

The Commission's Rules and Regulations have been kept well abreast with current changes and practice, and have been altered and amended with new Regulations as has been found necessary. These new regulations have been carefully prepared and have been approved by Order-in-Council.

Test cases in police courts have shown that the Regulations are in order and convictions have been registered by magistrates with little hesitation in all parts of the Province where information has been laid for violations of the Rules. This has had a salutary effect, and contractors and others now make little attempt to evade the Regulations. Considering the very large number of inspections recorded there has been no cause for complaint, and any alleged grievances have been quickly and satisfactorily adjusted.

Considerable energy has been devoted to the re-inspection of old installations for the purpose of calling for the necessary overhauling of defective and dangerous work. This has been very seriously handicapped by the scarcity of labor and the abnormal rate of wages and price of material. In spite of this fact, however, the Commission has succeeded in securing an expenditure of $109,045.79 in the remodeling of these old installations during the period of five months, from June 1, 1917, to October 31, 1917. These figures are fairly accurate, as all such work is recorded on daily reports received from each inspector. On these reports are recorded all inspections and fees collected, the expenses of each office, and each week all collections of fees are balanced with the inspectors' reports and bank deposits, so that the work and records of each inspection office are under accurate supervision.

The approval of electrical fittings, materials and devices is at the present time a live issue, and an urgent appeal is being made by all bona fide manufacturers of such material for a rigid set of regulations which will compel all parties to comply with a safe and uniform standard, in the same manner which is now in force in nearly all the large American cities and most of our western cities, prominent among which is the City of Winnipeg.

The work of the year has been generally very satisfactory. At the close of last year the Commission had a staff of forty-six inspectors, which, owing to the increase of work and territory, has now been augmented by the addition of five more inspectors.

RURAL POWER

General

During the past year, owing to the growing scarcity of labor and demand for increased production, the demand for electric power on the farm has become very widespread over the different districts of Ontario, and a number of rural lines have been constructed and are under construction at the present time. Petitions asking for estimates of the cost of service have been prepared and submitted to a large number of townships as detailed in another part of this report.

New Ontario Land Clearing

Engineering assistance was also given by the Rural Department to the Department of Lands, Forests and Mines in the application of power to land clearing at Monteith and Kapuskasing in Northern Ontario in the Soldiers' settlement.

Niagara Farms

By reason of acquiring certain areas pertaining to the right-of-way of the Power Canal of the Queenston power development, and of some 607 acres of land in connection with the rights-of-way of the Ontario Power Company, the Commission has created a department which is to manage this land, or that portion of it which is suitable for agricultural purposes as a farm or a series of farms for the Commission. In this way the Commission is endeavoring to do its part in the increase of production.

Dereham Township

From the Town of Tillsonburg 33.5 miles of 4,000-volt rural line are being built, and service has been given to thirty-one farms, and the Hamlet of Brownsville in one section and is being built to fifty-eight farms, and the Hamlet of Mount Elgin in another section.

South Dorchester Township

The rural line in Dereham Township out of Tillsonburg through Brownsville was extended 3.75 miles into this township to serve the village of Springfield and six farms along the route.

Townsend Township

In this township 4.5 miles of 4,000-volt rural line have been completed and connections are being made to ten farms south of Waterford.

North and South Norwich Townships

A number of extensions to the existing rural lines in this township have been made as follows:—

1. West from Burgessville to Holbrook to serve thirteen farms.
2. From Newark to Springford and along the concession roads east and west from this line to serve thirty-two farms and the Hamlet of Springford.
3. Extension on the Quaker Road approximately 310 feet to serve Deller Bros. brick yard.
4. Extension on the Young farm to serve a municipally operated gravel plant.

5. Extension into the Otterville Branch of the Borden Condensed Milk Company's plant at Otterville, in the township.

An estimate was submitted to North Norwich Township on the cost of a rural line to serve eighteen farms by a proposed extension west on the Quaker Road.

Waterloo Township

The line from Preston to Breslau was changed from 13,000 volts to 4,000 volts, and a number of farms are being served along this road. There was also completed an extension on North King Street from Waterloo to serve twelve farms in this district. Two syndicate outfits are now in operation in this district in addition to the one on the St. Agatha Road west from Waterloo.

Petitions were received and an estimate submitted on a proposed extension north from Breslau to New Germany, and also an extension south-west from Waterloo towards New Williamsburg and south from Kitchener towards Freeport and Centreville.

Louth Township

From Port Dalhousie an extension has been completed along the Lake Shore Road west a distance of 2.6 miles, to serve twenty-seven residents and fruit farms.

Petitions have been received and estimates have been prepared on a proposed extension west from St. Catharines along the middle road of this township to serve the Hamlet of Vineland, Jordan, Vineland Testing Station and the Police Village of Jordan Station.

East Oxford Township

A petition was received and estimates prepared and submitted in connection with a proposed extension south from the City of Woodstock to Curries Corners.

Operation of Farmers Syndicates

Uses on *three groups of farms* in Waterloo Township.

A further record of the operation of Syndicate No. 1 is submitted for the year 1917 for the purpose of comparison on the same syndicate as submitted in the 1915 and 1916 reports. In addition there is also submitted a report of the two additional syndicates which were placed in operation this year.

Waterloo Township Syndicate No. 1

WORK DONE BY 20-H.P. MOTOR, JANUARY 1, 1917 to JANUARY 1, 1918

No. 1 Farm		
Silo filling	12′ x 42′	silo filled, settled and refilled twice.
Threshing	550	bushels wheat.
	700	" oats.
	1,100	" mixed grain.
	300	" barley.
Chopping	1,700	"
Sawing wood	10	cords.
Lumber	46,000	feet (used in building barn).
No. 2 Farm		
Silo filling	14′ x 39′	silo filled, settled and refilled twice.
Threshing	450	bushels wheat.
	2,400	" mixed grain.
	600	" barley.
Chopping	1,000	"
Sawing wood	16	cords.
No. 3 Farm		
Silo filling	12′ x 40′	silo filled, settled and refilled twice.
Threshing	300	bushels wheat.
	1,000	" oats.
	1,800	" mixed grain.
	350	" barley.
Chopping	2,500	"
Sawing wood	10	cords.
No. 4 Farm		
Silo filling	8′ x 22′ and 9′ x 22′	silos filled, settled and refilled twice.
Threshing	300	bushels wheat.
	1,200	" mixed grain.
Chopping	800	"
Sawing wood	20	cords.
No. 5 Farm		
Silo filling	11′ x 30′	silo filled, settled and refilled twice.
Threshing	225	bushels wheat.
	1,750	" mixed grain.
Chopping	600	"
Sawing wood	14	cords.
No. 6 Farm		
Silo filling	14′ x 40′	silo filled, settled and refilled twice.
Threshing	500	bushels wheat.
	400	" oats.
	1,200	" mixed grain.
Chopping	1,500	"
Sawing wood	10	cords.
No. 7 Farm		
Silo filling	11′ x 44′	silo filled, settled and refilled twice.
Threshing	1,000	bushels mixed grain.

Waterloo Township.—Syndicate No. 1

Uses of Power for Domestic and Power Purposes from January 1, 1917, to January 1, 1918

Rate—Service Charge (See Service Charge Column) Power 4c. per K.W.H. Discount 10% from Power only

Farm No.	POWER USED BY LIGHTING, SMALL MOTORS AND APPLIANCES Kilowatt Hours												Total	Cost per Year			
	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.		Domestic	Power	Service Charge	Total
1	73	61	67	56	54	45	40	37	48	38	63	73	655	$23.58	$79.88	$35.00	$138.46
2	62	69	59	50	52	49	49	35	37	41	65	65	633	22.77	48.17	30.00	100.94
3	41	45	36	22	21	22	31	20	20	23	38	38	357	12.85	49.03	30.00	91.88
4	65	66	49	48	46	32	33	33	37	37	52	55	553	19.89	31.61	35.00	86.50
5	31	31	22	17	14	12	12	16	14	17	28	30	244	8.79	32.94	30.00	71.73
6	41	50	66	61	54	41	28	27	39	38	67	68	580	20.88	43.60	30.00	94.48
7	On town system			.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	12.31	9.00	21.31
													3,022	$108.76	$297.54	$199.00	$605.30

	POWER USED BY 20 H.P. SYNDICATE OUTFIT DOING WORK AS PER ACCOMPANYING TABLE Kilowatt Hours																
1	.....	.....	.....	605	541	.....	.....	.....	.....	171	162	740	2,219	.....	$79.88	.....	.....
2	41	36	.....	70	.....	.....	.....	183	193	199	497	119	1,338	.....	48.17	.....	.....
3	74	.....	72	74	.....	.....	.....	93	363	64	40	582	1,362	.....	49.03	.....	.....
4	59	6	45	.....	.....	.....	.....	87	95	441	.....	145	878	.....	31.61	.....	.....
5	36	.....	.....	32	.....	.....	.....	.....	229	43	.....	575	915	.....	32.94	.....	.....
6	.....	33	.....	54	46	.....	.....	.....	288	.....	.....	790	1,211	.....	43.60	.....	.....
7	.....	.....	.....	.....	.....	.....	6	.....	217	119	.....	.....	342	.....	12.31	.....	.....
													8,265	.....	$297.54	.....	.....

EQUIPMENT ON FARMS

1. 1 H.P. 3 phase motor, washing machine, iron, toaster, vacuum cleaner
2. " " " " " "
3. " " " " " "
4. 1 H.P. 3 phase motor " " " " " "
5. " " " " " "
6. 1 H.P. 1 phase motor " " " " " "

} Uses included in domestic record table.

Waterloo Township Syndicate No. 2

WORK DONE BY 20-H.P. MOTOR FROM DATE OF INSTALLATION UNTIL JANUARY 1, 1918

No. 1 Farm	
Silo filling	12′ x 40′ and 12′ x 40′ silos filled, settled and refilled.
Threshing	300 bushels wheat.
	700 " barley.
	300 " mixed grain.
	700 " oats.
Chopping	450 "
Sawing wood	5 cords.
No. 2 Farm	
Silo filling	12′ x 30′ silo filled, settled and refilled.
Threshing	100 bushels wheat.
	1,400 " oats and mixed grain.
Cutting straw	2 days.
Sawing wood	4 hours.
No. 3 Farm	
Silo filling	12′ x 42′ silo filled, settled and refilled.
Threshing	200 bushels wheat.
	600 " oats.
	300 " mixed grain.
Sawing wood	6 cords.
No. 4 Farm	
Silo filling	9′ x 10′ x 23′ and 8′ x 9′ x 23′ silos, filled, settled and refilled.
Threshing	100 bushels wheat.
	1,400 " oats.
	800 " barley.
Straw cutting	3 hours.
Sawing wood	8 cords.
No. 5 Farm	
Silo filling	9′ x 24′ and 10′ x 14′ x 20′ silos filled (in ¾ days), settled and refilled.
Threshing	200 bushels wheat.
	600 " oats.
	300 " mixed grain.
Sawing wood	6 cords.
No. 6 Farm	
Silo filling	12′ x 33′ silo filled, settled and refilled.
Threshing	100 bushels wheat.
	500 " oats.
	200 " barley.
	200 " mixed grain.
Chopping	900 "

Waterloo Township Syndicate No. 2

Uses of Power for Lighting, Small Power and Large Power Purposes from the date of Installation until January 1, 1918
Rate—Service Charge $30.00 per year ; Power 5c. per K.W.H. Discount 10% from Power only

POWER USED BY LIGHTING AND APPLIANCES
Kilowatt Hours

Farm No.	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total	Cost per Year: Domestic	Small Power	20 H.P. Motor	Service Charge	Total
1	.....	.....	.....	.....	.....	7	10	21	24	42	48	52	204	$9.18	$2.70	$27.13	$17.50	$56.51
2	.....	.....	.....	.....	.....	11	11	24	25	43	50	59	224	10.08	.45	12.28	17.50	40.31
3	.....	.....	.....	.....	.....	8	3	5	4	32	31	39	122	5.49	8.10	15.79	17.50	46.88
4	.....	.....	.....	.....	.....	7	13	16	14	26	31	35	142	6.39	5.62	25.29	17.50	54.80
5	.....	.....	.....	.....	.....	15	15	18	20	25	29	25	147	6.61	1.35	9.04	17.50	34.50
6	.....	.....	.....	.....	.....	13	29	38	34	52	51	61	278	12.51	.....	17.46	17.50	47.47
													1,117	$50.26	$18.22	$106.99	$105.00	$280.47

POWER USED BY 5 H.P. MOTOR
Kilowatt Hours

1	.....	.....	.....	.....	.....	10	10	10	.....	20	10	.....	60	.....	$2.70	.....	.....	.....
2	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	.....	.....	10	.....	.45	.....	.....	.....
3	.....	.....	.....	.....	.....	20	30	30	20	20	20	40	180	.....	8.10	.....	.....	.....
4	.....	.....	.....	.....	.....	10	15	15	5	30	20	30	125	.....	5.62	.....	.....	.....
5	.....	.....	.....	.....	.....	.....	.....	.....	.....	10	10	10	30	.....	1.35	.....	.....	.....
6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
													405	.....	$18.22	.....	.....	.....

POWER USED BY 20 H.P. SYNDICATE OUTFIT DOING WORK AS PER ACCOMPANYING TABLE
Kilowatt Hours

1	.....	.....	.....	.....	.....	.....	.....	.....	.....	140	169	294	603	.....	.....	$27.13	.....	.....
2	.....	.....	.....	.....	.....	.....	.....	57	178	19	.....	19	273	.....	.....	12.28	.....	.....
3	.....	.....	.....	.....	.....	.....	.....	68	13	135	69	66	351	.....	.....	15.79	.....	.....
4	.....	.....	.....	.....	.....	.....	.....	135	17	200	.....	210	562	.....	.....	25.29	.....	.....
5	.....	.....	.....	.....	.....	.....	.....	62	.....	104	35	.....	201	.....	.....	9.04	.....	.....
6	.....	.....	.....	.....	.....	.....	.....	37	198	.....	52	101	388	.....	.....	17.46	.....	.....
													2,378	.....	.....	$106.99	.....	.....

EQUIPMENT ON FARMS

1.—5 H.P. 3 phase motor washing machine, iron toaster
2.—5 H.P. 3 " " " " " "
3.—5 H.P. 3 " " " " "
4.—5 H.P. 3 phase motor iron toaster
5.—5 H.P. 3 " " " "
6.—2-1 H.P. 1 phase motor on lighting circuit, iron toaster.

Waterloo Township Syndicate No. 3

WORK DONE BY 20-H.P. MOTOR FROM DATE OF INSTALLATION UNTIL JANUARY 1, 1918

No. 1 Farm		
Silo filling	12′ x 30′	silo filled, settled and refilled.
Threshing	100	bushels wheat.
	1,050	" oats.
	50	" barley.
	650	" mixed grain.
No. 2 Farm		
Silo filling	12′ x 36′	silo filled, settled and refilled.
Threshing	1,300	bushels oats.
	500	" barley.
Chopping	225	"
Rolling	80	"
No. 3 Farm		
Silo filling	11′ x 25′ and 8′ x 25′	silo filled, settled and refilled.
Threshing	260	bushels wheat.
	900	" oats.
	350	" barley.
	1,200	" mixed grain.
Chopping	350	"
No. 4 Farm		
Silo filling	10′ x 16′ x 30′	silo filled, settled and refilled.
Threshing	65	bushels wheat.
	300	" oats.
	250	" barley.
	350	" mixed grain.
	60	" rye.
Chopping	250	"
Sawing wood	3	cords.
No. 5 Farm		
Silo filling	12′ x 28′	silo filled, settled and refilled.
Threshing	100	bushels wheat.
	1,000	" oats.
	600	" mixed grain.
	150	" barley.
Chopping	200	"
No. 6 Farm		
Silo filling	9′ x 24′	silo filled, settled and refilled.
Threshing	1,000	bushels oats.
	350	" barley.
	600	" mixed grain.
Chopping	300	"
Sawing wood	12	cords.

Waterloo Township—Syndicate No 3.

Uses of Power for Lighting, Small Power and Large Power Purposes from the date of the Installation of the Equipment until January 1, 1918
Rate—Service Charge $30.00 per year; Power 5c. per K.W.H. Discount 10% from Power only

POWER USED LIGHTING AND APPLIANCES

Farm	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total	Cost per Year: Domestic	Small Power	20 H.P. Motor	Service Charge	Total
1	.....	.....	.....	.....	.....	10	22	34	28	47	36	42	219	$9.85	.....	$10.66	$17.50	$38.01
2	.....	.....	.....	.....	.....	9	15	20	27	45	52	62	230	10.35	.....	13.27	17.50	41.12
3	.....	.....	.....	.....	.....	5	5	9	10	20	27	36	112	5.04	.....	17.32	17.50	39.86
4	.....	.....	.....	.....	.....	10	15	22	27	53	56	47	230	10.35	.....	14.21	17.50	42.16
5	.....	.....	.....	.....	.....	12	17	27	34	70	65	96	321	14.44	$6.16	13.41	17.50	51.51
6	.....	.....	.....	.....	.....	15	16	23	29	53	55	55	246	11.07	.....	13.81	17.50	42.38
													1,358	$61.10	$6.16	$82.78	$105.00	$255.04

POWER USED BY 5 H.P. MOTOR—K.W.H.
Kilowatt Hours

1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
5	.....	.....	.....	.....	.....	.....	20	30	7	40	30	10	137	.....	$6.16	.....	.....	.....
6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
													137		$6.16			

POWER USED BY 20-H.P. SYNDICATE MOTOR DOING WORK AS PER ACCOMPANYING TABLE
Kilowatt Hours

1	.....	.....	.....	.....	.....	.....	.....	.....	52	68	.....	117	237	.....	.....	$10.66	.....	.....
2	.....	.....	.....	.....	.....	.....	.....	.....	68	77	.....	150	295	.....	.....	13.27	.....	.....
3	.....	.....	.....	.....	.....	.....	.....	66	56	58	.....	205	385	.....	.....	17.32	.....	.....
4	.....	.....	.....	.....	.....	.....	.....	70	49	102	17	80	318	.....	.....	14.31	.....	.....
5	.....	.....	.....	.....	.....	.....	.....	43	55	70	.....	130	298	.....	.....	13.41	.....	.....
6	.....	.....	.....	.....	.....	.....	.....	71	32	67	68	69	307	.....	.....	13.81	.....	.....
													1,840			$82.78		

EQUIPMENT ON FARMS

No. 1.—1 H.P. single phase motor on lighting circuit, iron, toaster.
2— " " "
3—1 H.P. single phase motor on lighting circuit " "
No. 4—1 H.P. single phase motor on lighting circuit, iron, toaster.
5—5 H.P. three " " " " "
6—1 H.P. single " " " " " "

ELECTRIC RAILWAY WORK

General

The work of collecting data and statistics of construction methods, operating revenues and expenses of existing electric railways was continued during the year. A number of lines were inspected and data obtained first hand from officials in charge.

The Chief Engineer, while in the west during the summer, interviewed the presidents and operating officers of some of the more progressive lines in that district, such as the Chicago, Milwaukee & St. Paul, the Spokane and Inland, the Pacific Electric, the Southern Pacific, etc. The officials met were most obliging and furnished details of their revenues and expenses that will be of considerable service to the Commission. The experiences of these companies with special equipment such as high-voltage converting machines, highway crossing-signals, pantagraph-trolleys, etc., are of special interest, as such apparatus is not in use on electric lines in the east, and it is, therefore, difficult to obtain operating experience with them. The class of service given by these western roads is much superior to that found on our existing steam or electric lines, and closely resembles the service on our proposed trunk lines, so their operating rules and methods are particularly instructive.

The Commission collected information on freight business moving into and out of the towns on the proposed lines during the years 1915 and 1916. During the past year this information was carefully sorted, classified and tabulated. It has now been assembled in proper form for use in estimating the probable freight business that can be secured by constructing any of the proposed lines. It is thought that these studies represent the most careful and thorough work of this kind that has ever been attempted in Ontario. It involved considerable expense, but it was thought most advisable to have full and reliable information on this class of business rather than to follow the usual method of practically guessing at the probable revenue.

Proposed Hamilton—Niagara District Lines

As indicated in the last annual report the ratepayers on the proposed Port Credit-St. Catharines and the Welland-Port Colborne-Bridgeburg lines voted on by-laws on January 1, 1917, to construct these lines. The estimated cost of construction and equipment was placed at $11,360,363 and $2,208,716 respectively. Considerable opposition developed in some of the municipalities, especially in Hamilton and St. Catharines. In the former city the three daily papers were against the plan.

Meetings were held throughout the district, the speakers being supplied by the Hydro-Electric Railway Association. Engineers from the staff attended, to supply details of the estimates when requested. It was found that a great deal of the opposition mentioned above was due to a lack of knowledge of the plan, many thinking that the lines were to belong to the Commission after being bonused in the old method by the municipalities. Much of the opposition, however, was from those who were interested in the existing private companies in the district. The result of the voting on the two lines are given herewith—that for the Welland line showing that not a single municipality registered an adverse majority.

PORT CREDIT, HAMILTON, ST. CATHARINES LINE

Municipality	Vote		Majority	
	For	Against	For	Against
Toronto Township	237	125	112	
Trafalgar "	138	43	95	
Flamboro, E "	144	117	27	
Barton "	416	374	42	
Grimsby, N "	194	140	54	
Clinton "	219	29	190	
Louth "	275	7	268	
Granfham "	382	95	287	
Grimsby Village	159	59	100	
Beamsville "	165	23	142	
Oakville, Town	268	37	231	
Burlington "	250	123	127	
St. Catharines, City	1,049	375	674	
Nelson Township	90	101	.....	11
Saltfleet "	104	241	.....	137
Hamilton, City	3,192	3,626	.....	434
Total Vote	7,282	5,515	1,767	.....

WELLAND, PORT COLBORNE, BRIDGEBURG LINE

Municipality	Vote		Majority	
	For	Against	For	Against
Crowland Township	191	80	111	
Humberstone "	328	91	237	
Bertie "	538	114	424	
Humberstone, Village	146	4	142	
Port Colborne "	216	3	213	
Fort Erie "	78	8	70	
Welland, Town	452	85	367	
Bridgeburg, Town,	148	7	141	
Total Vote	2,097	392	1,705	.....

The municipalities on various proposed lines in the Niagara District were very much interested in the two lines that were being voted upon and it was decided to indicate just what further lines could be expected to be constructed in the district. A meeting was called at Hamilton in March and general figures of cost, revenue and expenses given to delegates from the municipalities on the following lines:

1. St. Catharines—Niagara Falls.
2. Hamilton—Port Dover.
3. Hamilton—Galt—Kitchener.

The delegates were very optimistic over the outlook for the construction of these lines at the close of the war, but it was felt that final recommendations and estimates should be left in abeyance until that time. The situation in Hamilton, where an adverse vote on the Port Credit-St. Catharines line was given, should also be cleared up first.

St. Catharines Street Railway

The local street railway is now operated by a private company under a franchise that is renewable every five years unless the property is purchased by the city. One of the five-year terms expires this year, and a deputation consisting of the mayor, some aldermen and city officials called at the office to secure information which would assist them in deciding whether or not the franchise should be renewed. The matter was carefully looked into subsequently by the city officials, and the Commission had some rough estimates prepared showing the probable cost of the property, the annual revenue and expenses if operated by the city. With this data before them, the Mayor and officials decided it would not be advisable to take over the line at this time.

London and Port Stanley Railway

The Commission assisted the officials of this line at various times during the year, both in connection with new rolling stock, highway crossing signals, and other matters. Four new trail cars and two new motor cars were purchased and equipped to assist in handling the enormous passenger service that is offered the line in the summer months. The two new motor cars that were designed by the Commission are probably the finest equipment to be found on any electric line in America. They are of steel construction throughout, and are provided with main, smoking and baggage compartments. The seats and interior furnishings are the best that can be secured, and are very much commented upon by travellers using the line. These cars are 75 feet in length, and were placed in service during July of this year.

Whitby

The Military Hospitals Commission has erected a large hosptial near the Asylum grounds, about one and one-half miles south of the centre of the Town of Whitby. There is no means of transportation from the hospital to the town or even as far as the Grand Trunk Railway station. It was, therefore, suggested that the Commission should construct that portion of the Toronto-Markham-Whitby Railway, that would provide transportation over the above route. It will be remembered that eleven municipalities voted favourably on by-laws in October, 1914, to provide for the construction of a line from the lake, at Whitby, northward through the town to Port Perry. This line, along with others from Stouffville and Brooklin, would connect with the City of Toronto.

The matter was taken up by the local Board of Trade and the project endorsed by the various manufacturers, the Asylum and military authorities. The Council requested the Commission to prepare a report on the suggested plan.

Engineers visited the municipalities and found that it would be perfectly feasible to construct a suitable line on the main street. This line would connect with the hospital and Asylum grounds, both the Grand Trunk Railway and Canadian Pacific Railway main stations, the three manufacturing plants, as well as running through the centre of the business and residential districts. The various establishments receiving and forwarding freight were called upon, and appeared anxious to assist the project any way that could be suggested to them. They supplied data as to freight moved and charges for same as handled at present.

The information obtained is now being used to prepare the report requested.

Baysville District

Acting on the resolutions received from municipal councils in this district, the Commission secured engineering and traffic data with which to prepare a report on the feasibility of constructing a line from the Grand Trunk Railway at Gravenhurst, Bracebridge or Huntsville to the Lake of Bays district.

The data obtained indicated that the most favourable location would be from Gravenhurst to Baysville, and in August 1916, a report was sent to the municipalities recommending the construction of a 28.8-mile line. The gross cost of construction and equipment was placed at $1,461,765, and the estimated annual revenue and expenses at $198,625 and $74,916 respectively. Interest of $63,875 increased the annual charges to a total of $138,791. The report stated that the figures of timber traffic, as furnished by various lumber companies, were not checked by the Commission's staff, and that this would have to be done before actual construction could be recommended by the Commission.

A meeting of delegates of the municipalities was held on November 22, 1916, at Gravenhurst, and the lumber companies stated that the proposed rates were too high for them to consider. The rates were about 50 per cent. higher than standard mileage rates on trunk lines. It was also found that there had been a misunderstanding in figuring on some of the timber that was available. The lumber companies presented a proposed schedule of rates that would be satisfactory to them and a revised estimate was made and sent to the municipalities in February 1917. This estimate covered the same line, but the revenue was reduced to $113,750, and the annual charges, including interest, were placed at $148,004. The municipalities were very much disappointed at the conclusions, and found upon investigating the matter that the lumber companies had suggested rates that were much lower than those charged on steam trunk lines. They then requested a third estimate, which was sent to them in March. This estimate was based on lumber rates equivalent to those charged on steam roads. These figures placed the total annual revenue and charges at $133,840 and $127,828 respectively. This third report is now under consideration by the municipalities and lumber companies.

Proposed Ottawa—Morrisburg Line

The data secured from this district in 1916 by the Commission was used to prepare a report on a line from Morrisburg, through Chesterville to Ottawa. The Commission authorized a report to the municipalities, but further information on revenue was promised by some residents of the district, and it was thought advisable not to forward the report, until this information had been received and studied.

Ontario West Shore Railway

This line, extending from Goderich to Kincardine, was promoted some years ago and the municipalities induced to bonus the line for $400,000. A right of way was purchased, some grading and track-laying done, but finally the property was abandoned, and the municipalities are now paying some $20,000 a year interest on debentures, but have no prospect of ever receiving service over the line. Acting on requests from the municipalities, the Commission examined the line and prepared an estimate of the cost of completing the work and also on the probable operating revenue and expenses of the line if opened for traffic.

Alternative figures were furnished on electric and gasoline cars and the information sent to the municipalities in December 1914. The report was not a favorable one, and it was thought best to endeavor to dispose of the property this year while prices for second-hand railway equipment were unusually high. Before doing so, however, the municipalities asked for a more detailed investigation into the cost of completing the line and placing it in service. A survey was made and exact estimates prepared, which indicated that $642,000 additional money would have to be put into the property to complete it, and that the annual revenue and charges would be $58,434 and $107,070 respectively.

A report with the above figures was sent to the municipalities under date of March 28, 1917. Delegates from the municipalities met to consider the report and decided to advertise the tracks and property for sale to the highest bidder. The greater part of the equipment was subsequently sold to the Commission for use on the Niagara Development Railway.

Peterborough Street Railway

Although there are few if any cities as small as Peterborough that are supplied with as good a street railway system as that furnished by the Commission, still there is a demand for additional tracks in sections of the city that have now no service. The Commission is now engaged in preparing a report on the feasibility of constructing additions to the existing tracks. The presence of so many level street crossings of the steam lines along with the river make it a difficult matter to improve the existing layout.

Proposed Minden District Railway

A deputation from this district called at the office and requested the Commission to prepare a report on the feasibility of constructing and operating a line into Minden Village from Coboconk or Kinmount. The Commission has secured traffic information by calling on the various shippers, and has made a survey of a line from Kinmount Junction to Minden, a distance of about ten miles. A report is now being prepared for submission to the municipalities.

MUNICIPAL WORK

Cobden

The local hydro-electric plant installed during 1916 has given entire satisfaction. Considerable increases in lighting and power loads have been effected.

Street Lighting

In this municipality was installed the first outdoor pole-type of constant-current transformer, with stationary coils, that has been placed in service in Ontario. This transformer has a capacity of 7.5-k.w., with 2,300-volt primary, and 6.6-ampere secondary circuit. There are 31 lamps of 150 candle-power and 13 lamps of 400 candle-power, all being gas-filled, incandescent series lamps. The system was designed and installed under the supervision of the Commission, and was placed in service on November 25, 1917.

Gore Bay

In response to a request an engineer visited Gore Bay during the summer of 1917 and collected data in connection with a proposed distribution system for the town. There being no power demand, lighting will be the chief use for electrical energy.

Haliburton

The Municipality of Dysart has applied to the Commission for engineering assistance in designing and constructing a local hydro-electric plant and distribution system. Estimates are being prepared with a view to going forward with this construction during the coming year.

Minden

Municipal surveys were made for light and power in this district, in connection with investigations for an electric railway line from Kinmount Junction.

Monteith

At the request of the Provincial Department of Lands, Forests and Mines, the Hydro-Electric Power Commission made a reconnaissance survey in May 1917, of the power site on the Driftwood River at Monteith, Ontario, with the object of ascertaining whether a supply of power could be developed for the Monteith Soldiers' Training Farm and the Municipality of Monteith.

A wooden dam had already been built at this site for lumbering purposes by the Monteith Pulp and Timber Company, and it was found that a head of fourteen feet would be available for power development. The flow of water was estimated to be sufficient to develop about 75 h.p.

For this small development it was decided to purchase the second-hand turbine and generator offered for sale by the Municipality of Paris, Ontario, and to construct a short timber flume and wheelpit with suitable buildings for housing the machinery. Work was commenced on October 19th and at the date of this report is nearing completion. It is expected that power will be available early in the year 1918.

The Commission during the past year gave assistance to the Ontario Department of Agriculture in the installation of a generating station on the Driftwood River capable of developing 75 h.p., and the construction of a distribution system to supply the Soldiers' settlement and the Sailors' and Soldiers' School at Monteith.

Parry Sound

Detailed investigations were made on the power possibilities of the Seguin River. A report and sketch of proposed alterations and extensions to the present power plant were forwarded to the town officials. Actual construction of the plant and conservation system has been deferred on account of the high cost of materials and labor.

Sudbury

Considerable work has been done in connection with a proposed supply of power to the British-American Nickel Company, and it is anticipated that the power agreement will be executed early in the coming year.

Thessalon

In response to a request an engineer visited Thessalon and investigated the power possibilities of the district, including Blind River and Bruce Mines. An ample supply of power in the vicinity is capable of development, but a market sufficient to warrant hydro-electric development has not yet been secured.

There are prospects of pulp mills locating in this district and this would make power at reasonable rates available to the municipalities adjacent thereto.

GENERAL ENGINEERING

Municipal Waterworks

In addition to the activities of the Commission in connection with waterworks as described elsewhere under the headings of the various municipalities concerned, information has been supplied to a number of cities, towns and villages regarding their pumping and water supply requirements. Among these are Exeter, Preston, Listowel, Galt, St. Thomas, Goderich, Paris, Stratford and Woodstock. In most instances these estimates concerned pumping requirements, for either domestic or fire supply; in some, attention was given to sewage pumping, while for the last named city, a valuation of the waterworks plant was made at the request of the municipality.

In a number of cases pumping equipment and water supply for small institutions and farm buildings have received attention. Among these are the farm buildings of Mr. R. J. Graham, Belleville, and the McLaughlin Estate, Whitby.

Fixation of Nitrogen

The fact that this subject was under investigation was referred to in the 1916 Annual Report and some general notes on the subject were given indicating the great importance now attached to it throughout the civilized world for the manufacture both of artificial fertilizers and of explosives.

Records have been kept during the year of the progress of the industry and various new developments have been noted. This department has now on file a considerable mass of information relating to this subject.

Utilization of Peat

Data have been collected from various sources relating to the utilization of peat as fuel both for heating and for the generation of power, and a preliminary report has been prepared, from existing records, on the feasibility of erecting in

Canada plants for making producer gas from peat, using it for the generation of electric power, and recovering by-products.

Preservation of Timber

In connection specially with the preservation of poles and cross arms this subject has been under review for some time; a good deal of information has been assembled and the merits of the various methods in use in different places have been noted. Recently a specification covering the preservative to be used and the methods of application which may be employed has been prepared for the use of the Commission.

Inspection and Testing

During the year the following work has been done:—

1. Insulators.

The following units have been inspected and delivered for construction and replacement purposes:—

90,000	— 110,000 V.	Susp.	Type.
3,700	— 44,000 V.	Pin	"
16,000	— 26,000 V.	"	"
20,000	— 13,000 V.	"	"
107,800	— 4,000 V.	"	" and Telephone.
5,500	— strain		"
2,000	— Misc.		"
Total..245,000			

2. Cable.

(*a*) Alum. steel reinforced, refabricated.

1,000	lbs.	— No. 2 S.R.A.C.
75,000	"	— 145,000 c.m. S.R.A.C.
569,572	"	— 6/0 S.R.A.C.
60,000	"	— not yet refabricated.

Of the above 69,158 lbs. of the aluminum content were bought and 387,165 lbs. taken down from existing lines.

(*b*) Copper.

40,000	lbs.	— 500,000 c.m.
30,000	"	— 4/0 stranded.
75,000	"	— 2/0 "
227,000	"	— 1/0 "
50,000	"	— Misc.

(*c*) Steel wire.

58,000	lbs.	—No. 14 BWG.
400,000	"	—No. 13 NBS.
1,055,000	"	—No. 12 "
407,000	"	—No. 9 " (both hard and soft).
355,000	"	—No. 6 "

Of the above, 230,000 lbs. of No. 12 has been used for aluminum steel reinforced cable core. The balance, along with the No. 12 and No. 13, is being stranded into guy, ground and conductor cable.

375,000 lbs. of No. 9 has been fabricated into guy and conductor cable. The balance is largely in stock.

TESTING AND RESEARCH LABORATORIES

Mention was made in the preceding Annual Report of the proposed additions to the laboratory space and equipment. These changes are now being accomplished. The space in the original building previously occupied by the stores, machine shop and garage was vacated about September 1st, and the installation of the necessary partitions, electric circuits, equipment, etc., was immediately begun. It is expected that this work will be completed in about four months. Reference will be made below to the principal features of the new installation and the proposed additions to equipment.

In addition to the general work of the laboratories which is described below, reference will here be made to work of a special and research nature. The problem of relay protection has received considerable attention and progress is being made along several lines of investigation which show promise of satisfactory results.

The question of the suitability of iron and steel for electric line conductors is being extensively investigated. These investigations include principally tests on an experimental line erected near the laboratories and will include all commercial sizes and grades of iron and steel wire.

In addition to these laboratory tests, a test was made on a 22,000-volt line, 25 miles long, for which iron wire had been used. The line was short circuited at the load end, the metering equipment was set up in the power house and the 4,000-volt generators connected directly to the line in order to obtain the low voltage necessary to force current through the line. This test furnished a check on the laboratory measurements and gave sufficient data to calculate directly the regulation of the system concerned.

Other subjects of investigation include the study of special cases of trouble arising in connection with the installation or operation of equipment on the system, some of which have necessitated the re-design of, or modification of existing apparatus.

The Commission is co-operating with the University of Toronto in connection with the industrial research programme which has been inaugurated by that institution. A member of the laboratory's staff was appointed to a research fellowship in October. He is making investigations which have a direct bearing on a problem now being studied by the Commission, and is working in co-operation with the laboratories and operating staff.

The increase in the volume and variety of general testing work has been very great during the year and especially during the past six months. It has probably been most marked in connection with the approval of electrical devices and the transfer of used apparatus for the municipalities.

A full description of the activities of the various departments of the laboratories follows:—

High Tension and General Testing Laboratory

The work of the High Tension and General Testing Laboratory as mentioned in previous reports, has covered a great variety of tests during the year, of which approximately one-half may be described as routine tests for various departments of the Commission or for municipalities served by the Commission. Of the remainder about one-half were approval tests of a great variety of electrical devices and fittings submitted by manufacturers who wished to sell these goods in the Province of Ontario, and the rest are special tests or investigations carried on at the instance of various departments of the Commission.

During the year the volume of work in all lines as just outlined has increased greatly, especially in the matter of approval inspection and testing. It is expected that this will still further increase in the coming year as more manufacturers avail themselves of the use of the laboratories.

To carry on the work, a special devices and fittings testing room is being equipped, in which all such low-voltage appliances may be both electrically, and where necessary, mechanically tested. Since the last report there have passed through the laboratory many types of equipment inclusive of such as cartridge and plug-fuses, knife and oil switches, motor-starters, service-boxes, sockets, rosettes and a great number of heating appliances, consisting of air-heaters, grates, electric logs, grills, toasters, water heaters, etc.

These have all been tested with the view of eliminating to the greatest degree the danger of fire hazard from their use in the homes and offices of the ultimate consumer and also of rendering each device as far as practicable safe to handle by the public.

As mentioned in previous reports the high tension testing laboratory has been of great value to the Commission in the so-called routine tests, that is tests which are a matter of routine work only and require no special investigation to obtain results. Under this head may be included the monthly testing of oil samples from all the high tension transformers and oil switches on the Niagara System, the testing of special samples from new distributing stations or from municipal or industrial consumers of power, of which approximately fifty were made since last report was written.

A considerable portion of time is spent on the examining and testing of used distributing transformers and motors which, as has been noted before, are handled by the Commission as agent for various municipalities. This work has also been considerably augmented recently and upwards of seventy transformers and motors have been handled by the laboratory in the year. Other transformers and instrument transformers have been given high potential or resistance to ground tests, notably one of the 5,000-kv-a., 110,000-volt transformers at Toronto Terminal Station in the latter part of the year. Air-break disconnecting switches manufactured in the Commission's machine shop are also given flashover test before being shipped out for installation on 13,200, 26,000 or 44,000-volt transmission lines. Megger and flashover tests have been applied to various types and sizes of line and station insulators for the purpose of checking field observations or attempting to solve problems met with by the operating department.

The standard specifications for rubber gloves have been adopted in the past year and now all gloves for use on lines or stations of the system or for municipalities when purchased through the Commission are submitted to the laboratories for acceptance test.

It is proposed in the coming year to institute a monthly re-test of all rubber gloves used by the various departments, and to facilitate this a complete record system for keeping the history of each glove has been adopted.

Special investigations and tests have been conducted for a variety of purposes a few of which may be mentioned. An investigation of the conditions tending to produce electrolysis in the cable duct lines feeding the Niagara Transformer Station. The investigation of the failures of choke-coils in some of the low tension stations, efficiency tests of motors and pumps for municipalities, insulation and physical tests on insulating tapes and varnishes, measurements of water resistivity and dielectric strength of various insulating materials were among some of the problems attacked during the year. Some work was also done on the design of some equipment for testing and for charging the high tension transmissiion lines. Under this heading may also be included the work done by the laboratories on the investigation of the properties of iron and steel wire for transmission purposes and the investigation of the whole matter of relay protection for the Niagara Distributing System. These latter investigations, however, were conducted by special members of the staff outside the personnel of the high tension laboratory.

To the high tension testing equipment that has been in use in the laboratory for some three years now has been added a complete range of spheres in three sizes: three inch, six inch and ten inch. These are mounted in wooden frames according to the standards of the American Institute of Electrical Engineers and provided with control of the gap adjustment. The high tension voltage measurements obtainable with these spheres have a high degree of accuracy. It is proposed and plans have already been drawn to provide a complete low tension testing equipment by which all motors, transformers, heaters and other electrical devices operating on voltages up to 2,200 volts may be completely tested. This equipment will consist of three test panels, each with its necessary oil switch relay and instrument transformers. The first panel will be a three-phase, 2,300-volt, 40-ampere panel, and will be capable of testing three or two-phase, 25-cycle, 2,300-volt motors up to 175 h.p., or 60-cycle, 2,300-volt motors up to 65 h.p., which is the present capacity of the laboratory 60-cycle generator. By this panel also transformers up to 90-kv-a. at 2,300-volts may be tested. Panel number two will be a three-phase, 550-volt, 200-ampere panel and will be capable of testing three or two-phase, 25-cycle, 550-volt motors to 200 h.p., or 60-cycle, 550-volt motors to 65 h.p. It will also be able to test 25-cycle transformers up to 100-kv-a., or in other words any appliance requiring less than 200 amperes and at less than 600 volts. A third panel is being provided for use in all direct current equipment tests up to a rating of 200 amperes, 250 volts. Besides the three stationary test panels mentioned above, a portable panel for use any place in the laboratory is being installed at once which will be capable of testing any single-phase appliance requiring not more than 60 amperes at 250 volts.

In the laboratory extension plans room has been provided for practically trebling the floor space previously occupied by the high tension laboratory. The rooms on the ground floor formerly occupied by the meter and photometric departments will now be used for test rooms and office space by this department. In the basement a work shop and storage room and a receiving floor have been set aside for this department in space previously occupied by the machine shop. With this increased space and equipment, the work of this laboratory will be greatly facilitated.

Meter and Standards Laboratory

The activities of the Meter and Standards laboratory have embraced a wide variety and a considerable volume of both research and routine work. Solutions have been found for many of the problems which continually arise in electrical measurement. New types of apparatus have made their appearance and have been examined as to their adaptability to the purpose for which they are intended. And, in the meantime, efforts have been made to fulfil the requirements of the every day routines of metering.

With the new laboratory standard instruments it has become possible to make checks on the accuracy of portable apparatus with reasonable speed and precision, so that periodic tests may now be made on the various portable meters employed in the laboratory work. Equipment belonging to other departments also is calibrated, and instruments are sent in by the municipalities for checks on accuracy as well as for repairs. In the new extension of the laboratory there has been provided a special room where the standard instruments, permanently set up, away from all disturbing influences may at any time be used without fear of interference with other work.

In the course of the year a number of new meters, particularly for the measurement of demand, have been placed on the market and upon these some extensive tests have been made. In this connection there has also been run a detailed investigation into the theory of demand measurement with particular reference to the comparative value of the arithmetical average and what is known as the logarithmic average as basis for the computation of demand. The former quantity is what has been aimed at in most meters of the electro-mechanical type; but owing to the fact that, unfortunately, there has not yet appeared any instrument to measure it with absolute definiteness, there has been a tendency to discount the arithmetical average in favour of the logarithmic. The latter quantity has the merit that the logarithmic law governs the heating of apparatus; and, as meters whose indications follow this law can be produced it is possible to obtain a check on the limiting factors of the load. On the other hand there has been raised to this method of metering, the objection that an intelligent comprehension of the true significance of the values obtained, demands a knowledge of some rather intricate mathematical relationships; whereas the meaning of arithmetical average is very easily understood.

Considerable oscillographic work has been done during the year. This includes a detailed investigation into the operating characteristics of electrolytic lightning arresters on systems where no transformers are interposed between the line wires and the generator winding.

Oscillographic records have also been obtained of electrical quantities concerned with pieces of apparatus undergoing repair and alterations. Among these may be mentioned telephones, meggers and automobile magnetos.

A large number of measurements on the resistance of various kinds of wire for telephone lines have been made, and samples of metal submitted for bus and cable clamps have been tested for conductivity. To facilitate this work a Kelvin double bridge is being procured.

The watt-hour meter department has handled a large volume and great variety of work in the year. Much study and research has been devoted to the development of a system of meter inspection. It is felt that present methods are not keeping pace with the rapid strides in the art of metering, and there are many points where improvements over the system now in use may well be made. This is

particularly true of curve-drawing and demand meters. A full report on this matter has been prepared and submitted to the meter committee of the Commission.

The system of rebuilding old meters has found favour among the owners and users of that class of apparatus, and the demand for second-hand instruments continually exceeds the supply. During the year almost 1,500 meters of various makes, types and sizes have been passed through in this way, and large shipments are in sight for the coming year. As there are now in stock in the Commission's storehouse large numbers of new meters, there has become necessary a certain amount of supervision of the quality of the goods. These meters were bought on the results of acceptance tests made by the laboratory. Occasional visits are made by members of the staff to the factory where they are built, and it is thus possible to keep a certain check on the workmanship and material entering into their construction. Occasional complaints from customers, about unsatisfactory operation of meters, have been investigated, the responsibility properly assigned, and the trouble rectified where necessary. The facilities of the Laboratory are at the disposal of the Dominion Government inspectors for the testing and sealing of meters for use in the Toronto inspection district. Besides a large percentage of the repaired meters, above referred to, there have passed through the laboratory for inspection, in the year, over five hundred new meters.

In addition to the classes of work dealt with in the foregoing paragraphs, and a large number of minor tasks such as the repairing of meggers, indicating and graphic meters, relays and time switches, there has been done under the direction of this department a great volume of the engineering work connected with the new laboratory extensions. This has included the location of testing rooms and storage space, the layout of power, lighting and testing circuits, and the design of test benches and tables for a variety of special requirements.

Lamp Laboratory

The condition of the incandescent lamp market during the past year has been very unsettled, due to the enormous demand on American lamp factories and the difficulty of securing shipments of European lamps. Japanese lamps have appeared on the Canadian market and several of other makes heretofore unknown generally are being found. The efforts of the purchasing department of the Commission and some lamp distributing companies to keep posted on the quality of the lamps appearing on the market have resulted in an increased use of the lamp laboratory. The test racks have been used to full capacity, and in order to handle the increase of work temporary circuits were added. The routine testing of stock lamps has been carried on as usual. Particular efforts are being made to prevent the shipment of all gas-filled lamps that are liable to give unsatisfactory service. Our methods of detecting defects are such that complaints are very few. A portable testing table is under consideration that will facilitate the testing of all gas-filled lamps so that the Commission will be reasonably sure that every lamp is in satisfactory condition before shipment.

On account of the rapid development of series lamps since the installation of our life test equipment our present equipment has become entirely inadequate, and it became necessary, both to enlarge the racks and to provide a more suitable means of supplying current to them. For the latter purpose a constant-current transformer has been ordered. With the original equipment only a very limited number of different sizes and current ratings could be placed on the racks at one time. The controls for the constant-current transformer are arranged so that the entire

capacity may be taken up by lamps of one current rating regardless of size or the individual currents may be separated or grouped and supplied with different current value as may be required. This arrangement provides great flexibility and it is expected to fulfil any requirement for series lamp testing that may arise.

The lamp laboratory has been hampered for some time by insufficient space in which to carry on the work. New quarters on the top floor have been allotted, which provide more room and easy access to the lamp stock which is on the same floor. In the re-installation of the test apparatus in the new location provision is made for future extensions without in any way interfering with the present equipment.

New electrical metering equipment has been acquired by the department that enables much greater accuracy to be attained.

A change has been made in the rating of the Commission's series lamps. The old rating was in terms of candle power. The new lamps are rated according to their watts consumption. This has been done because candle power as applied to the gas-filled series lamps has no real significance and is not a measure of the light output of the lamps. Under the watts rating the number of lamps that may be supplied by one transformer is determined without any reference to lamp efficiency. This plan is working out satisfactorily. The two ratings are here compared:—

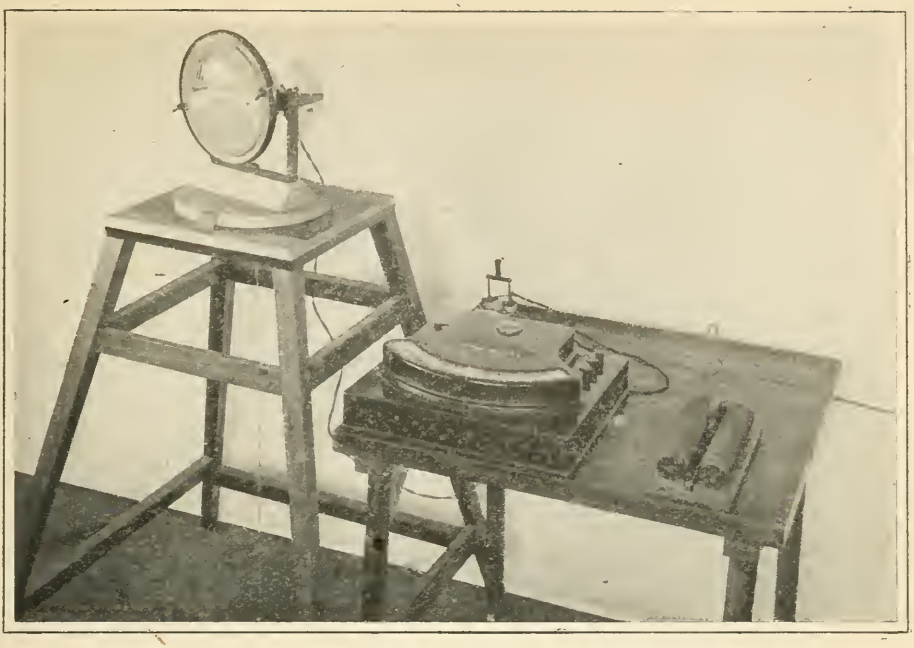
Old Candlepower Rating.	Equivalent Watts Rating.
100	80
150	100
500	250
750	500
1,000	750

Tests of series amps., made according to the new specifications, indicate that the 4,000-hour lamps will give satisfactory service.

Illumination Laboratory

The illumination laboratory has, as in former years, made tests of illuminating devices and materials as required by various departments of the Commission as well as by some outside parties.

The ordinary distribution tests of reflectors and globes have formed the bulk of the work. Tests were made of the total transmission of light of some samples of different types of window glass. Considerable difference was found among different kinds and the results indicate that this feature is worthy of consideration in the planning of day lighting of buildings. A thorough investigation of automobile head lamp glasses was made to determine the characteristics of the beams of light from them. The principal features under test were the distribution of light in the beam and the road illumination resulting from such. The results of the former, when plotted as curves, showed the direction of maximum intensity angular spread and the relative amounts of glare resulting from the different types of glasses. For this purpose a standard automobile head lamp was set up so that different angular positions from the horizontal axis could be made in vertical and horizontal planes. The measurements were made with an illumination photometer at a distance of 30 feet. Measurements of road illumination were made at 10-foot intervals from 10 feet to 100 feet from the headlight. The types of glasses tested included prismatic and diffusing. It was found that the two types are very widely different in their characteristics.



An Automobile Headlight set up for Test

A View of the Photometer Room, Lamp Laboratory. An 84-inch Spherical Photometer is Shown at the Right.

Structural Materials Laboratory

Though but a little over a year old this department is already one of the largest in the laboratories. Its work has grown both in volume and in diversity and now includes the chemical as well as the purely physical testing of the materials used in engineering. It has, therefore, been necessary to devote additional space, install a more complete and varied equipment, and add to the staff to take care of these increased demands.

The department now occupies approximately 2,500 square feet of floor space, of which 750 square feet is devoted to housing the testing machines and other large apparatus, 350 square feet is set apart for a cement and sand laboratory, the same amount for a chemical laboratory, 800 square feet is used as a concrete laboratory and the rest as a moist room and for miscellaneous storage. The whole is amply supplied with cupboards, tables, benches and other miscellaneous equipment, so arranged as to facilitate the work being carried out.

As was noted in the last annual report, complete equipment for the testing of concrete and its constituent materials was then on order or contemplated and most of this is now installed. Some of the principal items included are: An Olsen hydraulic compression machine of 200,000 pounds capacity, a complete set of both sand and stone sieves, having a combined range of from 0.0029 inches up to 3.00 inches, a Howard and Morse power-driven mechanical sieve shaker of a capacity to handle both the sand and stone sieves just noted, and a score or more of each of 2-inch, 6-inch and 8-inch cylindrical moulds for casting mortar and concrete test pieces.

Further additions have been made to our cement testing equipment giving us a capacity of ten complete tests per day. To do this has required a large number of additional moulds, increased storage facilities, another cement-testing machine and a quantity of miscellaneous equipment of various kinds.

A start has been made toward equipping a chemical laboratory. A very fine analytical balance has been purchased and there is now on order the necessary equipment and chemicals to enable qualitative and quantitative tests to be made on metals, cements and other inorganic compounds. Besides this, we are now installing equipment for the testing of gasolines and motor fuels, and have under consideration the purchase of that necessary for the testing of transformer and lubricating oils.

Although there have been many other additions to the equipment of this department only one more will be mentioned, a 2-inch Berry strain gauge for determinations on the elastic properties of metals. This instrument is of the latest and most accurate type, so arranged as to give readings which are the average of two determinations on opposite sides of the specimen. It is capable of the very finest work and can be used to detect a change in length in the bar under test of as little as .00002 inches.

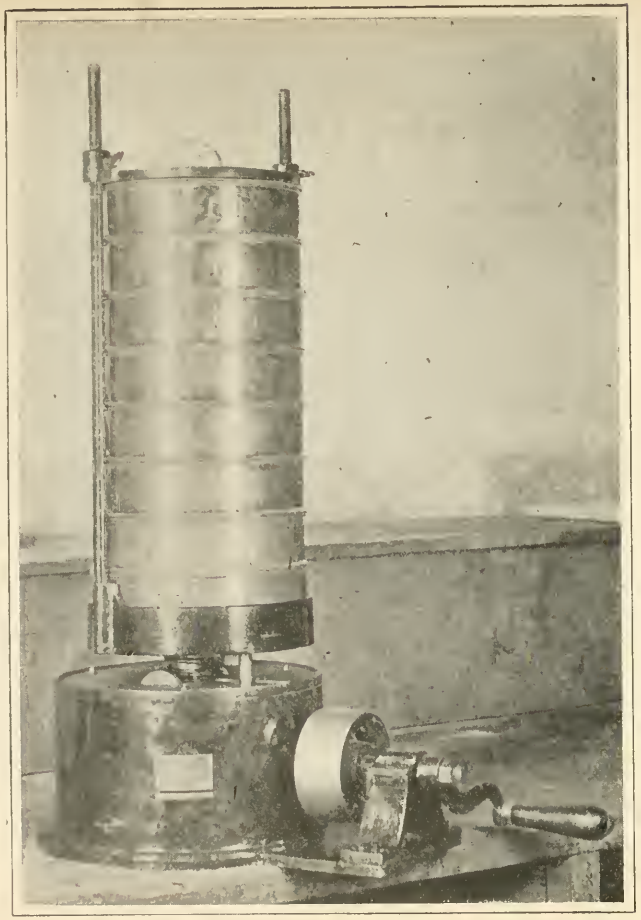
By far the greater part of the work of this department comprises tests and investigations on concrete and its constituent materials. During the year just past fourteen sand and gravel pits have been investigated. Such an investigation comprises a field examination of the pit and extensive laboratory tests upon representative samples of the deposit. In addition to this some sixty samples of sand and gravel have been received and tested. Further, all cement used in any of the Commission's work is regularly tested, and this work alone runs into a large number of tests in a season's time.

This is not the only work, however, being done on concrete and its constituent materials. A very extensive study is now under way in connection with the Niagara Power Development. Materials from the sources to be used on this work are being proportioned in various ways to determine the most economical mix which will give the desired strength and watertightness: also, what changes in these proportions will be necessary to take care of the inevitable changes in the character of the natural materials. In this same connection studies are being carried out with a view to classifying concrete not by the ratio of its different constituent materials, but by the minimum compressive strengths obtained at set ages. This will involve preliminary tests on the materials prior and during construction, and check tests on the concrete as made on the job. Besides this, much work, preliminary to these studies, has been necessary to standardize test procedure and apparatus before much of the above could be begun. This work has now been nearly completed.

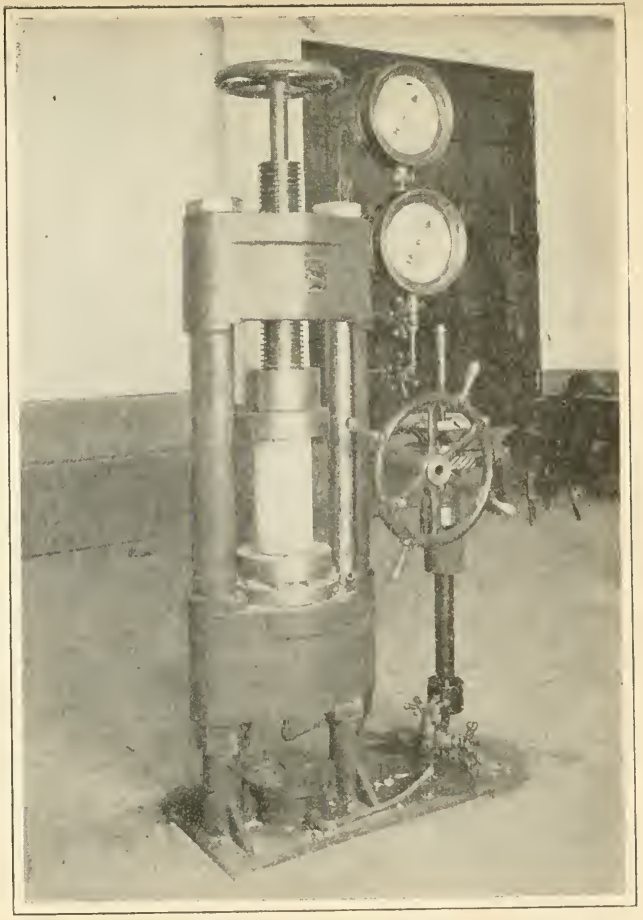
As was noted at the beginning, this department's activities have broadened and work is being done in lines other than the testing of cement, concrete and the various metals. Previously some attempts had been made to test paint but with indifferent success. During the year this work has been placed on a more rational basis: system has been put into the method of handling paint inquiries; a card index has been kept covering all available information on the paints submitted to us for test; exposure tests have been standardized and steps are now under way to make it possible to check up by chemical means purchases of these paints with the samples previously submitted for our examination.

The testing of gasoline has been instituted. The Commission is a large consumer of gasoline, and in view of this and the present unsatisfactory state of the gasoline industry, it has been deemed desirable to place some check upon the quality of our purchases. Initial studies of methods for carrying out this work have been made and the necessary special apparatus ordered. It is expected that this will be in place and that this work will be actively under way early in the coming year.

Besides those mentioned many other kinds of tests were carried out during the year. These include chemical analyses on various materials, mechanical tests on insulators, physical tests on transformer oils, galvanizing tests on wire and line hardware, tension tests on steel and other metals and miscellaneous studies on the necessary equipment for certain proposed new lines of work. This miscellaneous work is rapidly on the increase and will continue to increase as the fact that the laboratory has facilities at hand to carry it out successfully, is more fully realized.



An Agitator with a Nest of Sieves in Place. It is used by the Structural Materials Laboratory to Save Labor in Making Tests of Sand and Gravel.



A 200,000-pound Compression Testing Machine in the Structural Materials Laboratory. A Concrete Specimen is Shown Under Test.

GENERAL CONSTRUCTION

General

The work on station construction during the past fiscal year has been carried on under increasing difficulties in securing material and labor. Deliveries have become slower and manufacturers' promises in many cases have not been met, owing to the raw material situation consequent upon war conditions. In order to keep a check on the manufacturing conditions, inspectors were sent by the Commission at frequent intervals to the factories of the contractors, and every effort was used to hasten deliveries. Prices on all material and apparatus have increased considerably over the prices in effect the previous year.

Administration Building

Owing to the necessity for increased accommodation for the staff at the Administration Building, it became necessary to fit out for offices a dwelling at 55 Murray street, which is situated at the rear of the Administration Building. This was done and the building was occupied as an office in August.

As this increased accommodation was not found to be sufficient, the dwelling at 59 Murray street was purchased by the Commission. This, also, is being altered for office use and will be occupied early in November.

The dining-room for the staff and the electric kitchen in the basement of the Administration Building were completed and placed in service in March.

Service Building

The work on the extension to Toronto Storehouse on Strachan avenue, referred to in the last Report, was carried on throughout the winter by Messrs. Witchall and Sons, the contractors, and the building was completed early in the summer. Following this, the work necessary for remodelling the original building for the Laboratory extension was completed.

The name of this building was changed from the Toronto Storehouse to the Service Building. A Bell telephone private branch exchange was installed in August, which, in conjunction with the extension of the automatic telephone system in this building, affords ample telephone service.

The Service Building, including the extension, is now 132 feet long by 112 feet 5½ inches wide, and is 49 feet 4 inches high from the basement floor to the top of the parapet.

The extension provides for a garage at grade level, 66 feet wide and 112 feet 6 inches long, a machine-shop of same dimensions immediately over the garage. The addition will also give increased storage space. Two elevators were installed, one with platform 20 feet 6 inches long by 8 feet wide, to run from the garage floor to the third floor level. The other elevator is in the storage section. This has a platform 10 feet by 7 feet and runs from the basement floor to the third floor level. Shipping and receiving platforms were erected at the sides of the building for convenience in handling shipments. The construction of a railway siding to this building is under consideration.

British Forgings, Limited (Imperial Ministry of Munitions)

At the request of the Imperial Ministry of Munitions, the services of the Commission were used in the design, purchase and installation of the electrical equipment and distribution system required for the electric steel furnace plant of British Forgings, Limited, Ashbridges Bay, Toronto. Owing to restrictions by the Imperial Ministry of Munitions, no details of the equipment installed may be published.

Instructions to handle this work with all possible speed were first received on January 8, 1917. Plans were immediately prepared and materials purchased as speedily as possible. Frequent visits were made by the Commission's inspectors to the plants of the electrical manufacturers. Many parts were made in the Commission's own machine shop, in order to get quick delivery.

The actual installation work of the electrical equipment was started on April 25, 1917. All work was finally completed by the end of October.

The Service Building, Strachan Avenue, Toronto.

Table No. 1

CAPACITIES OF TRANSFORMERS INSTALLED OR ORDERED FOR COMMISSION'S STATIONS*

Total Capacity, 506,640 Kv-a.

Station	Voltage	Transformers Installed		Transformers on Order		Total Station Capacity Kv-a.	System Capacity Kv-a.
		Mfr.	Kv-a.	Mfr.	Kv-a.		
NIAGARA SYSTEM.	25-Cycles						
1. Niagara Transformer Station	12,000—110,000	C.W.Co.	99,500	C.W.Co.	67,500	.....	
	12,000— 45,700	C.G.E.Co.	35,000	.....	.....	202,000	
Niagara Falls Distributing Station	12,000— 4,000	C.W.Co.	300†	.....	.....	300	
2. Dundas Transformer Station	110,000— 13,200	C.G.E.Co.	7,500†	.....	.....	7,500	
Caledonia Dist. Station	13,200— 2,300	P.T.Co.	450	.....	.....	450	
Waterdown " "	13,200— 2,300	C.C.W.Co.	225	.....	.....	225	
Hagersville " "	13,200— 4,000	C.W.Co.	225	.....	.....	225	
Lynden " "	13,200— 4,000	C.W.Co.	225	.....	.....	225	
3. Toronto Transformer Station	110,000— 13,200	C.G.E.Co.	20,000	C.G.E.Co.	55,000	.....	
	110,000— 13,200	C.G.E.Co.	32,500†	.....	.....	107,500	
4. London Transformer Station	110,000— 13,200	C.G.E.Co.	8,750	.....	.....	8,750	
Dorchester Dist. Station	13,200— 4,000	C.W.Co.	225	.....	.....	225	
Lucan " "	13,200— 4,000	C.G.E.Co.	225	.....	.....	225	
Delaware " "	13,200— 4,000	P.E.Co.	75	.....	.....	75	
Exeter " "	13,200— 4,000	C.G.E.Co.	300	.....	.....	300	
5. Guelph Transformer Station	110,000— 13,200	C.W.Co.	3,000	.....	.....	3,000	
Acton Dist. Station	13,200— 2,300	C.W.Co.	225	.....	.....	225	
Georgetown Dist. Station	13,200— 4,000	C.G.E.Co.	450	.....	.....	450	
Rockwood " "	13,200— 2,300	C.G.E.Co.	75	.....	.....	75	
Cheltenham " "	13,200— 575	C.G.E.Co.	225	.....	.....	225	
Fergus " "	13,200— 2,300	C.G.E.Co.	225	.....	.....	225	
Elora " "	13,200— 4,000	C.W.Co.	225	.....	.....	225	
6. Preston Transformer Station	110,000— 6,600	C.G.E.Co.	3,000	.....	.....	.....	
	110,000— 6,600	C.G.E.Co.	2,250†	.....	.....	.....	
	13,200— 575	P.E.Co.	225†	.....	.....	5,475	
South Waterloo Tp. Dist. Station	6,600— 4,000	C.G.E.Co,	60	.....	.....	60	
7. Kitchener Transformer Station	110,000— 13,200	C.G.E.Co.	6,000	.....	.....	.....	
	110,000— 13,200	C.G.E.Co.	750†	.....	.....	6,750	
New Hamburg Dist. Station	13,200— 2,200	P.E.Co.	225	.....	.....	225	
Baden " "	13,200— 4,000	C.C.W.Co.	450†	.....	.....	450	
Elmira " "	13,200— 4,000	C.W.Co.	225	.....	.....	225	
St. Jacobs " "	13,200— 575	M.E.Co.	75	.....	.....	75	

* Spare transformers are included. † Transformers to be transferred to other stations.

Table No. 1—Continued

CAPACITIES OF TRANSFORMERS INSTALLED OR ORDERED FOR COMMISSION'S STATIONS*—Continued

Total Capacity, 506,640 Kv-a.

Station	Voltage	Transformers Installed		Transformers on Order		Total Station Capacity Kv-a.	System Capacity Kv-a.
		Mfr.	Kv-a.	Mfr.	Kv-a.		
8. Stratford Transformer Station	110,000— 26,400	C.W.Co.	5,000				
	26,400— 575	C.G.E.Co.	150			5,150	
Listowel Dist. Station	26,400— 4,000	C.W.Co.	300			300	
Harriston " "	26,400— 4,000	C.G.E.Co.	225			225	
Tavistock " "	26,400— 4,000	C.C.W.Co.	225			225	
Milverton " "	26,400— 4,000	C.G.E.Co.	225			225	
Palmerston " "	26,400— 4,000	C.G.E.Co.	225			225	
Dublin " "	26,400— 4,000	M.E.Co.	50			50	
9. St. Mary's Transformer Station	110,000 13,200	C.G.E.Co.	3,000			3,000	
St. Mary's Cement Dist. Station	13,200— 575	C.G.E.Co.	1,500				
	13,200— 575	P.E.Co.	450†			1,950	
10. Woodstock Transformer Station	110,000— 13,200	C.G.E.Co.	3,000			3,000	
Beachville Dist. Station	13,200— 2,300	C.G.E.Co.	225†			225	
Norwich " "	13,200— 2,300	S.Co. of C.	150			150	
Embro " "	13,200— 4,000	P.E.Co.	50			50	
11. St. Thomas Transformer Station	110,000— 13,200	C.G.E.Co.	4,500				
	13,200— 920	C.W.Co.	1,110				
	13,200— 920	C.W.Co.	555†			6,165	
Port Stanley Dist. Station	13,200— 2,300	S.Co. of C.	150			150	
Dutton Dist. Station	13,200— 4,000	C.W.Co.	225			225	
West Lorne Dist. Station	13,200— 4,000	C.W.Co.	225			225	
12. Cooksville Transformer Station	110,000— 13,200	C.G.E.Co.	5,000				
	13,200— 2,300	S.Co. of C.	150†			5,150	
Mimico Dist. Station	13,200— 4,000	C.C.W.Co.	450			450	
Port Credit Dist. Station	13,200— 2,300	C.G.E.Co.	225			225	
Cooksville " "	13,200— 2,300	P.E.Co.	40			40	
Streetsville " "	13,200— 4,000	C.G.E.Co.	225			225	
Woodbridge " "	13,200— 4,000	C.G.E.Co.	225			225	
Etobicoke, Temp'n "	13,200— 2,300	M.E.Co.	1,500	M.E.Co.	750	2,250	
Etobicoke Perm't "	13,200— 2,300			C.C.W.Co.	3,000	3,000	
13. Brant Transformer Station	110,000— 26,400	C.W.Co.	5,000			5,000	
Waterford Dist. Station	26,400— 4,000	C.W.Co.	225			225	
Drumbo " "	26,400— 4,000	C.G.E.Co.	225			225	

Ayr " "	26,400— 4,000	C.G.E.Co.	225			225		
St. George " "	220— 4,000	C.C.W.Co.	150			150		
Burford " "	26,400— 4,000	C.W.Co.	225			225		
14. Kent Transformer Station	110,000— 26,400	C.W.Co.	5,000			5,000		
Wallaceburg Dist. Station	26,400— 4,000	C.G.E.Co.	450	P.E.Co.	450	900		
Tilbury " "	26,400— 4,000	C.G.E.Co.	300			300		
Dresden " "	26,400— 4,000	C.W.Co.	225			225		
Bothwell " "	26,400— 4,000	C.W.Co.	225			225		
Thamesville " "	26,400— 4,000	C.W.Co.	225			225		
Ridgetown " "	26,400— 4,000	C.W.Co.	225			225		
Blenheim " "	26,400— 4,000	C.W.Co.	225			225		
Forest Dist. Station	26,400— 4,000	C.C.W.Co.	225			225		
Oil Springs Dist. Station	26,400— 4,000			M.E.Co.	75	75		
Watford " "	26,400— 4,000	M.E.Co.	50			50		
Brigden " "	26,400— 4,000			M.E.Co.	50	50		
15. Essex Transformer Station	110,000— 26,400	C.W.Co.	10,000			10,000		
Canadian Salt Co. Dist. Station	26,400— 176			M.E.Co.	2,250	2,250		
								404,815
QUEENSTON DEVELOPMENT. (Construction Stations)								
Montrose Sub-Station	12,000— 4,000			C.G.E.Co.	3,000			
	4,000— 575			M.E.Co.	600			
	12,000— 440			C.G.E.Co.	1,100	4,700		
Whirlpool Sub-Station	12,000— 4,000			C.G.E.Co.	4,500			
	4,000— 575			M.E.Co.	1,200			
	12,000— 440			C.G.E.Co.	2,210	7,910		
								12,610
EUGENIA SYSTEM.	60-Cycles							
Eugenia Generating Station	4,000— 22,000	C.W.Co.	2,700	C.W.Co.	2,700	5,400		
Owen Sound Dist. Station	22,000— 2,300	C.W.Co.	1,650			1,650		
Chatsworth " "	22,000— 4,000	C.G.E.Co.	75			75		
Chesley " "	22,000— 4,000	C.G.E.Co.	300			300		
Durham " "	22,000— 4,000	C.G.E.Co.	150			150		
Durham Cement " "	22,000— 2,300			C.G.E.Co.	750†	750		
Mount Forest " "	22,000— 4,000							
Hanover " "	22,000— 4,000	C.W.Co.	375†			375		
Shelburne " "	22,000— 4,000	M.E.Co.	150			150		
Grand Valley " "	22,000— 4,000	C.G.E.Co.	225†			225		
Orangeville " "	22,000— 4,000	M.E.Co.	450†			450		
Kilsyth " "	22,000— 4,000			M.E.Co.	75	75		
Elmwood " "	22,000— 4,000			M.E.Co.	50	50		
								9,650
SEVERN SYSTEM.	60-Cycles							
Big Chute Generating Station	2,300— 22,000	C.W.Co.	3,600			3,600		
Penetanguishene Dist. Station	22,000— 2,200	C.C.W.Co.	600			600		

* Spare transformers are included. † Transformers to be transferred to other stations.

Table No. 1—Continued

CAPACITIES OF TRANSFORMERS INSTALLED OR ORDERED FOR COMMISSION'S STATIONS*—Continued

Total Capacity, 506,640 Kv-a.

Station	Voltage	Transformers Installed		Transformers on Order		Total Station Capacity Kv-a.	System Capacity Kv-a.
		Mfr.	Kv-a.	Mfr.	Kv-a.		
Barrie Distributing Station	22,000— 2,300	C.G.E.Co.	700			700	
Collingwood " "	22,000— 2,300	M.E.Co.	75			75	
Coldwater " "	22,000— 2,300	C.G.E.Co.	1,200			1,200	
Elmvale " "	22,000— 2,300	C.W.Co.	225			225	
Stayner " "	22,000— 4,000	C.W.Co.	300			300	
Port McNicoll " "	22,000— 2,300	C.G.E.Co.	50			50	
C.P.R. Pt. McNicoll "	22,000— 575	C,G,E,Co.	1,500			1,500	
Waubaushene " "	22,000— 2,300	C,G,E,Co.	50			50	
Midland " "	22,000— 2,300	M.E.Co.	900			900	
Alliston " "	22,000— 4,000			C.W.Co.	120†	120	
							9,320
WASDELL'S FALLS SYSTEM.	60-Cycles						
Wasdell's Falls Gen. Station	2,300— 22,000	C.W.Co.	1,050			1,050	
Beaverton Dist. Station	22,000— 4,000	C.W.Co.	300			300	
Cannington " "	22,000— 4,000	C.W.Co.	300			300	
							1,650
ST. LAWRENCE SYSTEM.	60-Cycles						
Prescott Dist. Station	26,400— 2,300	C.G.E.Co.	450			450	
Winchester " "	26,400— 2,300	C.G.E.Co.	150			150	
Brockville " "	26,400— 2,300	C.G.E.Co.	600			600	
							1,200
PORT ARTHUR SYSTEM.	60-Cycles						
Port Arthur Dist. Station	22,000— 2,000	S.Co. of C.	5,250			5,250	
							5,250
MUSKOKA SYSTEM.							
South Falls Generating Station	6,600— 22,000	C.G.E.Co.	1,200			1,200	
Huntsville Dist. Station	22,000— 2,300	C.G.E.Co.	900			900	
							2,100
CENTRAL ONTARIO SYSTEM.							
Generating Stations:	60-Cycles						
Fenelon Falls	600— 11,000	C.G.E.Co.	810			810	
Auburn	6,600— 44,000	C.G.E.Co.	3,750				
	2,100— 6,600	C.G.E.Co.	600			4,350	

Healy Falls	6,600—	44,000	C.W.Co.	10,250			10,250	
Stephens Dam	2,400—	44,000	C.W.Co.	5,625			5,625	
Sidney No. 2	6,600—	44,000	C.W.Co.	9,000			9,000	
								30,035
Sub-Stations:								
Northumberland Pulp Mill	44,000—	2,400	C.W.Co.	2,250			2,250	
Delora	44,000—	600	C.W.Co.	750			750	
Madoc	44,000—	4,160	C.C.W.Co.	480				
			C.G.E.Co.	300			780	
Sulphide	44,000—	4,160	C.C.W.Co.	480				
			C.G.E.Co.	750			1,230	
Stirling	44,000—	2,400	C.G.E.	100			100	
Lehigh Cement	44,000—	600	C.G.E.	3,000			3,000	
Point Anne Quarries	44,000—	600	C.G.E.	600			600	
Belleville Portland Cement	44,000—	600	C.G.E.	3,000			3,000	
Belleville	44,000—	2,400	C.G.E.	2,250			2,250	
Brighton	44,000—	2,400	C.G.E.	300			300	
Colborne	44,000—	2,400	C.G.E.	100			100	
Newcastle	44,000—	2,400	C.G.E.	100			100	
Bowmanville	44,000—	2,400	C.G.E.	1,500			1,500	
Oshawa	44,000—	4,160	C.G.E.	2,250			2,250	
Cobourg	44,000—	2,400	C.G.E.	600			600	
Port Hope	44,000—	2,400	C.G.E.	1,050			1,050	
Napanee	44,000—	2,400	C.G.E.	600			600	
Deseronto	44,000—	2,400	C.G.E.Co.	600			600	
Kingston	44,000—	2,400	C.G.E.Co.	1,500	C.G.E.Co.	750	2,250	
Millbrook	44,000—	2,400	C.G.E.Co.	100			100	
Trenton	6,600—	4,160	C.G.E.Co.	750	C.G.E.	750		
	6,600—	2,400	C.G.E.Co.	600			2,100	
Lindsay	44,000—	2,400	C.G.E.	1,500				
	11,000—	2,400	C.G.E.	750			2,250	
Peterboro	6,600—	2,400	C.G.E.	2,250			2,250	
								30,010
					Grand Total			506,640

* Spare transformers are included. † Transformers to be transferred to other stations.

Table No. 2

STATION TRANSFORMERS ORDERED FOR MUNICIPALITIES AND COMMISSION DURING FISCAL YEAR ENDING OCTOBER 31st, 1916

Station	Cycles	Voltage	Mfr.	No.	Kv-a. each	Total Kv-a.
Niagara Falls Trans. Station.....	25	12,000-63,500	C.W.Co.	9	7,500	67,500
Dunnville Municipal Station....	25	26,400- 2,300	C.G.E.Co.	3	150	450
Dundas Transformer Station.....	25	63,500-13,200	C.G.E.Co.	7	2,500	17,500†
Toronto Transformer Station.....	25	63,500-13,200	C.G.E.Co.	12	5,000	60,000
Guelph Transformer Station—						
Guelph Municipal Station	25	13,200- 2,300	C.G.E.Co.	2	225	.....
	25	13,200- 2,300	C.G.E.Co.	1	550	1,000
Kitchener Transformer Station ..	25	63,500-13,200	C.G.E.Co.	1	750	750†
St. Jacobs Dist. Station	25	13,200- 2,300	M.E.Co.	1	75	75
Baden District Station.....	25	13,200- 2,300	C.C.W.Co.	3	150	450†
Stratford Transformer Station—						
Dublin Dist. Station.....	25	26,400- 4,000	M.E.Co.	1	50	50
St. Marys Transformer Station —						
St. Marys Cement Dist. Station.	25	13,200- 575	P.E.Co.	3	150	450†
Woodstock Transformer Station—						
Beachville Dist. Station.....	25	13,200- 2,300	C.G.E.Co.	3	75	225†
Embro Dist. Station	25	13,200- 2,300	P.E.Co.	1	50	50
St. Thomas Transformer Station..	25	13,200- 920	C.W.Co.	3	185	555†
St. Thomas Municipal Station..	25	13,200- 2,300	C.G.E.Co.	1	750	750
Cooksville Transformer Station...	25	13,200- 2,200	S.Co. of C.	3	50	150†
Weston Municipal Station.....	25	13,200- 2,300	C.W.Co.	3	100	300
Etobicoke Temp. Dist. Station..	25	13,200- 2,300	M.E.Co.	3	750	2,250
Etobicoke Perm. Dist. Station..	25	26,400- 2,300	C.C.W.Co.	2	1,500	3,000
Kent Transformer Station—						
Sarnia Municipal Station.....	25	2,300- 370	C.W.Co.	3	185	555
Oil Springs Dist. Station.....	25	26,400- 4,000	M.E.Co.	1	75	75
Watford Dist. Station.....	25	26,400- 4,000	M.E.Co.	1	50	50
Brigden Dist. Station	25	26,400- 4,000	M.E.Co.	1	50	50
Wallaceburg Dist. Station.....	25	26,400- 2,300	P.E.Co.	3	150	450
Essex Transformer Station—						
Canadian Salt Co. Dist. Station.	25	26,400- 176	M.E.Co.	3	750	2,250
Queenston Development—						
Montrose Sub-Station.....	25	12,000- 4,000	C.G.E.Co.	2	1,500	.....
	25	2,300- 575	M.E.Co.	3	200	3,600
Whirlpool Sub-Station.....	25	12,000- 4,000	C.G.E.Co.	3	1,500	.....
	25	2,300- 575	M.E.Co.	6	200	5,700
Forebay Sub-Station	25	2,300- 575	M.E.Co.	3	200	600
Miscellaneous	25	13,200- 2,300	C.G.E.Co.	3	150	450†
	25	13,200- 2,300	C.C.W.Co.	3	150	450†
Big Chute Generating Station—						
Midland Dist. Station.....	60	22,000- 2,300	M.E.Co.	3	300	900
C.P.R. Pt. McNicoll Dist. Station	60	22,000- 575	C.G.E.Co.	3	500	1,500
Eugenia Falls Generating Station..	60	4,000-22,000	C.W.Co.	3	900	2,700
Alliston Dist. Sation	60	22,000- 2,200	C.W.Co.	2	40	80†
Durham Cement Dist. Station ..	60	22,000- 2,300	C.G.E.Co.	3	250	750†
Elmwood Dist. Station.....	60	22,000- 4,000	M.E.Co.	1	50	50
Hanover Dist. Station.....	60	22,000- 2,200	C.W.Co.	2	125	250†
	60	22,000- 2,200	C.W.Co.	1	125	125
Kilsyth Dist. Station	60	22,000- 4,000	M.E.Co.	1	75	75
Orangeville Dist. Station	60	22,000- 2,300	M.E.Co.	3	150	450†
Central Ontario System—						
Kingston Dist. Station	60	44,000- 2,400	C.G.E.Co.	3	750	2,250
Maintenance Stores	60	44,000- 2,400	C.G.E.Co.	1	750	.....
	60	44,000- 2,400	C.G.E.Co.	2	300	1,350
Smiths Falls Dist. Station	60	44,000- 2,400	C.G.E.Co.	1	750	750
Perth Dist. Station	60	44,000- 2,400	C.G.E.Co.	1	750	750
Omemee Dist. Station.....	60	44,000- 2,400	M.E.Co.	3	40	120
Trenton Dist. Station.....	60	6,600- 2,400	C.G.E.Co.	1	750	750

Table No. 2—Continued

STATION TRANSFORMERS ORDERED FOR MUNICIPALITIES AND COMMISSION DURING FISCAL YEAR ENDING OCTOBER 31st, 1916.

Station	Cycles	Voltage	Mfr.	No.	Kv-a. each	Total Kv-a.
Distributing Station Stock	25	26,400– 4,000	M.E.Co.	1	750	750
	60	44,000– 2,400	C.G.E.Co.	2	750	1,500
	60	22,000– 4,000	M.E.Co.	4	75	300
	60	22,000– 4,000	M.E.Co.	1	50	50
	60	22,000– 4,000	C.G.E.Co.	2	75	150
	60	22,000– 4,000	C.G.E.Co.	1	25	25
	25	26,400– 2,300	P.E.Co.	3	75	225

† Transformers transferred from other stations. Total Kv-a., 185,585

NOTE—The above table does not include the transformers purchased for British Forgings, Limited (Imperial Ministry of Munitions).

STREET LIGHTING

General

During the past year few ornamental systems have been constructed and work has been concentrated on the installation of the ordinary types of units, both in extensions of existing systems in some municipalities and in the replacement of obsolete equipment in others.

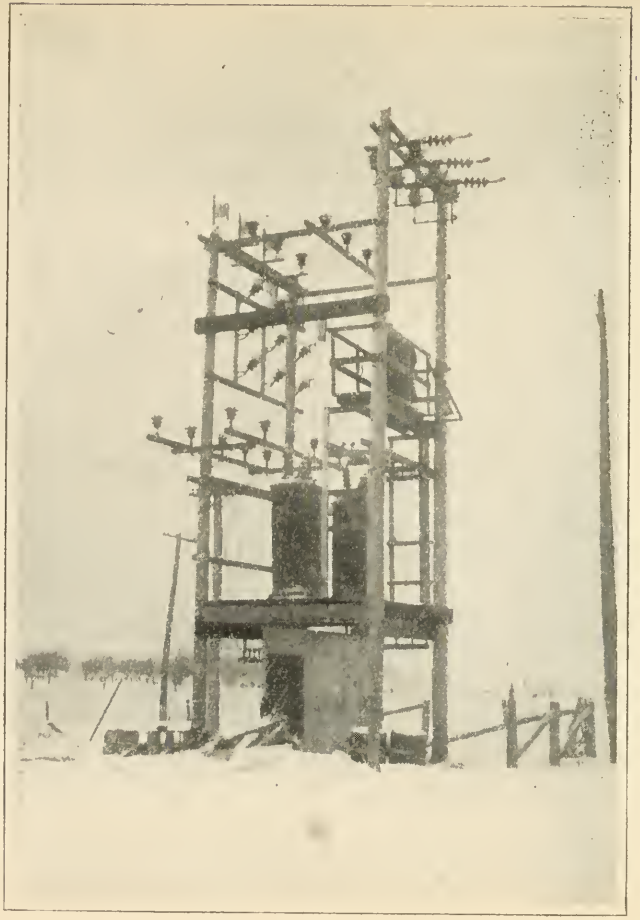
The general standard of street lighting in the Province is rapidly reaching a satisfactory condition in comparison with other districts. This is due to the extensive use of modern equipment and methods of construction, as well as to the liberal amount of illumination provided for the streets. The safety and convenience thus afforded and the improved appearance of the streets by day and by night constitutes one of the greatest benefits derived from the Hydro System. Considering the low cost at which it is supplied the return in service to the public compares favorably with that of any other form of public utility.

It is to be expected that improvement of lighting in the cities and more thickly populated districts will lead to a demand for similar service in a lesser degree along the travelled highways through the rural districts. Careful study will be required to ensure that such service may be provided at a minimum and reasonable cost. There is every reason to believe, however, that with the advance in the art the installation of these systems will become general.

Engineering advice regarding the purchase of new equipment or the operation of the street lighting systems was furnished for the following municipalities:—

Blenheim, Bloomfield, Chatham, Galt, Guelph, Gravenhurst, Kingston, Markdale, North Bay, Norwich, Peterboro, Petrolia, Perth, Pickering, Port Arthur, Renfrew, Ridgetown, Simcoe, Stratford, St. Catharines, Watford, Wellington, and Windsor.

Other street lighting advice and engineering work may be found detailed in Section IV, under the heading "Construction Work of the Commission."



Outdoor Type Distributing Station (44,000/2,400 volts) at Omemee.

A Constant Current Transformer (outdoor type) for the Series Street Lighting System at Omemee.

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Tenth Annual Report

OF THE

HYDRO-ELECTRIC POWER COMMISSION

OF THE

PROVINCE OF ONTARIO

FOR THE YEAR ENDED OCTOBER 31st

1917

VOLUME II.

PRINTED BY ORDER OF

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TORONTO:
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1918

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Corner Queen & John Sts.,
Toronto.

To His Honour, Colonel Sir John Hendrie, K.C.M.G., C.V.O.,

Lieutenant-Governor of Ontario.

May it Please Your Honour:

The undersigned has the honour to present to Your Honour the second volume of the Tenth Annual Report of the Hydro-Electric Power Commission of Ontario for the fiscal year ending October 31st, 1917.

Respectfully submitted,

Adam Beck,

Chairman.

Toronto, Ont., March 1st, 1918.

Colonel Sir Adam Beck, K.B., LL.D.,

Chairman, Hydro-Electric Power Commission,

Toronto, Ont.

Sir,—I have the honour to transmit herewith the second volume of the Tenth Annual Report of the Hydro-Electric Power Commission of Ontario for the fiscal year ending October 31st, 1917.

I have the honour to be,

Sir,

Your obedient servant,

W. W. Pope,

Secretary.

HYDRO-ELECTRIC POWER COMMISSION OF ONTARIO

COLONEL SIR ADAM BECK, K.B., LL.D.

HONOURABLE I. B. LUCAS, M.P.P.

COLONEL W. K. McNAUGHT, C.M.G.

W. W. POPE, Secretary.

F. A. GABY, Chief Engineer.

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OPERATION OF THE SYSTEMS

NIAGARA SYSTEM

Continued expansion characterized the operation of the Niagara System for the year 1917.

The increasing power requirements of the existing war munitions industries, and the addition of others, together with the normal yearly growth of the municipalities' demands, severely taxed the available generator capacity at Niagara Falls. However, up to the end of October, the Commission was enabled to meet its obligations, with a few exceptions.

On November 7th, the Commission's source of power supply was augmented by arrangements with the Canadian-Niagara Power Company, whereby the output of one 10,000 h.p. generator was paralleled with two generators already in operation on the Niagara Transformer Station bus. On December 17th, a fourth generator of the same capacity was added, and on July 4th, by a regrouping of the generators at the company's plant which supply power to the Commission, one more unit was placed at the Commission's disposal, making in all 50,000 horsepower.

While the power supplied from this company was at times reduced on account of generator failures and ice trouble, the service was quite satisfactory under normal operating conditions.

On August 1st, the operation of the generating plant, transformer stations, transmission lines and sub-stations of the Ontario Power Company was placed under the supervision of the Commission, in the interests of the Ontario Power Company, and while to date no radical change has been made in the method of operation, the resulting combination promises innumerable advantages with regard to improved service and increased economy in operation and maintenance. Several changes in the physical arrangement of the plant are well under way. One purpose of these changes is to permit of direct voltage regulation from the generating station, which will fulfill a long felt want. These changes will also increase the facilities for sectionalizing trouble.

The Niagara System was visited with electrical storms on sixty-three different days during the summer. On thirteen occasions, storms were reported over practically the entire system, of which seven were severe and the balance mostly moderate. Particularly violent disturbances were reported from Niagara Falls, while very severe concentrations occurred in St. Mary's, London, St. Thomas and Chatham districts. Only one total system high-tension interruption occurred, which could be directly attributed to lightning discharges.

The performance of the transmission high-tension lines was particularly gratifying during the past year. The line conductors required little or no attention, and inspections made from time to time confirmed the belief that the cable now in operation should not be the subject of concern relative to the reliability of the service. No failures of high-tension line insulators occurred during the year, and the results of the periodic megger tests of the dielectric strength of the units shews little or no deterioration in the strings erected during the last four years.

Some very interesting comparative figures from an engineering standpoint have been obtained from the tests of the various makes of insulators erected.

As the abnormal condition of the metal market rendered the purchase of line conductors for the new tower line between Dundas and Toronto injudicious for the present, and as an unusually large increase in the load supplied to Toronto munition plants and to the Imperial Ministry of Munitions and to other plants in the vicinity of New Toronto was anticipated, the Commission decided that for the welfare of the service the cross-section of the conductor forming the two No. 3/0 aluminum circuits on the old tower line should be increased. Accordingly, preparations were made to take down the old cable for re-fabrication at the factory, and the erection of No. 6/0 steel reinforced aluminum. A considerable portion of the extra aluminum required was obtained from scrap on hand, and some by replacing the aluminum conductor on other lines with iron wire, where the conductivity of those lines was considered greater than necessary for the present. On account of the high price of aluminum, the transfer proved decidedly economical, without any impairment of the service.

The restringing of the old tower line was commenced on May 20th and was practically completed in the month of October. The cost of the work indicates that financially it was very advantageously undertaken.

While the restringing of the section was being proceeded with, the operating features of this line were improved by the erection of a wooden structure at the Cooksville high-tension station. On this structure are mounted disconnecting switches, by means of which one circuit may now be switched to the other, or either line opened for sectionalizing purposes; also permitting the Cooksville high-tension station to be fed directly from either of the high-tension lines at this point. Other construction work completed by the line maintenance gangs outside of their regular duties follow.

The four telephone circuits on the wood pole line paralleling the old tower line between Niagara Falls and Dundas to a point just north of the Welland Canal to Niagara Falls, were transferred to the wood pole line which parallels the new tower line.

The No. 3/0 aluminum cable on the high-tension section between Kitchener and Stratford high-tension stations was replaced in the spring with 7 strand No. 9 steel cable. This change was proceeded with after a rather extensive investigation of the properties of the steel cable for the transmission of electrical energy. The mechanical performance of the new conductor was very satisfactory.

The 13,200 volt feeder between the Guelph high-tension station and the Fergus and Elora taps was double circuited by the erection of a circuit of No. 3/0 aluminum cable. An air-break switch and structure was erected at the corner of York road and Victoria streets in the municipality of Guelph, for the purpose of forming a break-down connection between the Guelph 13,200-volt system and the Fergus and Elora tap line, for emergency use.

The Commission purchased and took over the Interurban Power Company, and the Erindale Power Company's properties on January 11th, and proceeded to change the method of feeding the former customers of these companies to a more economical basis. The 13,200-volt No. 0 copper circuit, between the Interurban Company's Mavety street station in Toronto Junction, and the Ontario National Brick Company's plant, was removed and placed in stock. The No. 0 aluminum cable between the Mavety street station and the Erindale powerhouse was also

removed, and the aluminum cable used for the restringing of high-tension Section B. The brick company was temporarily fed from the Cooksville high-tension station on February 11th, from a connection to the feeder supplying the Mimico and Port Credit distributing stations, and later on, from a new circuit running north from the Cooksville high-tension station and then west on Dundas street to the company's yards. The customers of the Interurban Power Company of Etobicoke Township, formerly fed from the company's sub-station in New Toronto, were finally supplied with power from the Niagara System on July 31st.

A three-phase circuit of No. 0 aluminum was strung from the switching structure No. 290, at the Village of Beachville, to the new distribution station erected a little to the west of the village. The No. 1/0 aluminum circuit between Beachville and Embro was replaced with ¼-inch stranded steel conductor. By reason of the high market value of aluminum, the capital cost of this section was decreased by over twice the cost of the new conductor, plus erection.

The No. 3/0 aluminum conductor on the 4,000-volt circuit between the villages of Tilbury and Comber was replaced with 5/16-inch steel cable. In this case, the original capital expenditure was reduced nearly three times the cost of the steel conductor, plus erection.

The 13,000-volt circuits of the Baden distributing station were rearranged, and two air break disconnecting switches erected to accommodate the new feeder to the Village of Wellesley.

Extensions made to several of the high-tension and smaller distributing stations relieved the somewhat overloaded condition of the latter part of 1916, which permitted the station maintenance department to internally inspect and thoroughly overhaul the electrical and mechanical apparatus to provide against the anticipated increase in load during the coming winter. Failures of the station equipment were quite insignificant, and no difficulty was experienced in effecting repairs. As in the past years, several transfers of equipment from one station to another were carried out, where unexpected power demands developed.

The meter inspection department designed and erected pole-type, out-door metering equipment to measure the power supplied to the villages of Springfield and Burgessville, Zurich, Dashwood and Otterville, and indoor equipment at the Tillsonburg and Norwich municipal stations, to obtain a graphic record of the load of the rural customers from these stations. During the year a large amount of work was accomplished in connection with the tests and adjustments of meters and protective equipment in operation on the local distribution systems.

During the summer an engineer of this department made a thorough investigation of the methods of power measurement and service protecting devices, employed by some of the largest electrical corporations in the United States under actual working conditions. Where comparison is possible, it was found that the methods in use on the Commission systems are not excelled.

The tables given below shew the load demand of the various municipalities, as well as the increase during the year. The plotted curve on another page shows the monthly peak load taken by the Commission from the supply sources, from October, 1910, to October, 1917. If no shortage of generating capacity had occurred at Niagara Falls, the gradient of increase for the past year would have been very much greater.

Municipality	Load in H.P. Oct., 1916	Load in H.P. Oct., 1917	Increase in H.P.
Toronto	38,465	50,167	11,702
Dundas	548	597	49
Hamilton	8,562	11,622	3,060
Waterdown	71	65	.....
Caledonia	55	53.6	.....
Hagersville	97.8	99	1.2
London	7,359	8,552.5	1,193.5
Thorndale	22.8	22.8	.....
Thamesford	26.5	20.1	.....
Guelph	2,549.5	3,075	525.5
Ontario Agricultural College	160	146.7	.....
Military Hospitals Commission	203.5	182.3	.....
Rockwood	11.9	12.3	.4
Georgetown	300	348.3	48.3
Acton	70.3	192	121.7
Preston	1,149	1,150	1
Galt	2,285.5	2,466.5	181
Hespeler	450.4	338	.....
Breslau	30	30	.....
Kitchener	3,262	4,280	1,018
Waterloo	815	862	47
Elmira	109.9	134	24.1
New Hamburg	76.4	162.2	85.8
Baden	196.5	153	.....
Stratford	1,448	1,519	71
Mitchell	148.8	175.6	26.8
Seaforth	387.4	536	148.6
Clinton	101.8	106	4.2
Goderich	214.5	264.6	50.1
St. Mary's	434.3	396.7	.....
Woodstock	1,170	1,331	161
Ingersoll	792	858	66
Tillsonburg	242.6	296	53.4
Norwich	171.6	252.6	81
Beachville	96.5	167.6	71.1
St. Thomas	2,011	2,037.5	26.5
Port Stanley	75	70.4	4.6
Brantford	1,783	2,536	753
Paris	398	356.5	.....
Port Credit	59.6	67	7.4
Weston	197	754	557
Brampton	658.8	933	276.2
Milton	355	334	.....
Mimico	156.1	184	27.9
Mimico Asylum	31.5	30.8	.....
Provincial Brick Yard	136	128.7	.....
New Toronto	291	1,509.5	1,218.5
Toronto Township	99.1	45	.....
Cooksville	22.7	30	7.3
Dixie			
Windsor	1,502.6	1,852	349.4
Walkerville	1,576.5	1,972	395.7
Elora	77.7	130.3	52.6
Fergus	92.5	82.8	.....
Welland	5,626	4,283	.....
St. Catharines	2,433	4,520	2,087
Port Dalhousie	79	87.1	8.1
Strathroy	203.7	291.6	87.9
Drumbo	10.9	14.8	3.9
Plattsville	57.6	60.3	2.7
Woodbridge	76.4	86.6	10.2
Ayr	36.2	43	6.8
Princeton	10.4	10.3	.....
Embro	28.1	27.3	.....
Chatham	509.4	888.7	379.3

Municipality	Load in H.P. Oct., 1916	Load in H.P. Oct., 1917	Increase in H.P.
Lucan	30.2	142	111.8
Bolton	95.2	96.5	1.3
Mt. Brydges	26.8	25.7	.....
Wallaceburg	277.5	419.5	142
Delaware	8.9	8	.....
Tilbury	63	66.3	3.3
Simcoe	103.2	131.4	28.2
Waterford	97.8	105.6	7.8
Lambeth	17.9	18.5	.6
Grantham Township	17.4	10.1	.....
Dresden	68.3	70.6	2.3
Dorchester	16	14.7	.....
Comber	21.4	20	.....
Burford	31.5	32.7	1.2
Bothwell	28.1	62.5	34.4
St. George	38.2	30.1	.....
Dutton	44.9	44.5	.....
Thamesville	45	42.2	.....
Blenheim	77.7	81.7	4
Lynden	79.7	83.7	4
Ailsa Craig	16	80.4	64.4
Otterville	11.7	13.4	1.7
Exeter	77.7	123.3	45.6
Granton	12.4	41.3	28.9
Niagara Falls	2,364.5	2,304	.....
Petrolia	14.6	284	138
Wyoming	22.7	28	5.3
Ridgetown	91.1	136.3	45.2
Milverton	33.5	189	155.5
Listowel	117.9	184.5	66.6
Palmerston	93	88.5	.....
Harriston	52.9	98	45.1
Tavistock	28	220	192
Wellesley	13.4	114.6	101.2
Burgessville	8	35	27

A list of the municipalities connected during the year 1917.

Municipality	Date connected	Initial Load in H.P.	Load in H.P. Oct., 1917	Increase in H.P.
St. Jacobs	Aug. 28, 1917	72.4	72.4	.....
Stamford Township	Nov. 5, 1916	387.5	454.4	66.9
Sarnia	Nov. 10, 1916	268	1,126	858
Highgate	Nov. 6, 1916	13.6	18.7	5.1
Forest	Feb. 7, 1917	56.3	69.3	13
Watford	Aug. 11, 1917	49.6	49.6	.....
Dublin	Sept. 25, 1917	7.5	7.5	.....
Rodney	Jan. 15, 1917	24	31	7
West Lorne	Dec. 22, 1916	21.4	25.5	4.1
Etobicoke Township	July 31, 1917	85.8	97.8	12
Hensall	Dec. 21, 1916	37.5	26.8	.....
Dashwood	Aug. 24, 1917	35	35	.....
Zurich	Aug. 24, 1917	14.7	55	40.3
Springfield	July 7, 1917	20.4	21.4	1

Niagara System

Capital Investment of the Niagara System in operation at October 31, 1917:

Right-of-Way	$1,115,779 81
Steel Tower Transmission Lines	3,317,432 39
Telephone Lines	129,706 69
Relay System Lines	54,537 32
Wood Pole Lines	2,077,156 36
Transformer Stations, including conduit system (Ontario Power Co. to Niagara Station)	3,286,967 30
Distributing Stations	267,547 07
Total Operating Capital	$10,249,126 94

Total Expenditures in connection with the Operation and Maintenance of Niagara System for the fiscal year 1916-17:

Operators' Salaries and Expenses, including supplies		$105,955 64
Maintenance of Steel Tower Lines		81,241 81
" Telephone and Relay Lines		9,549 12
" Low Tension Lines		55,074 17
" Transformer Stations		73,533 60
" Distributing Stations		23,135 77
Administration		58,922 02
		$407,412 13
Interest on Invested Capital	$432,540 73	
Cost of Power at Niagara Falls	1,310,713 95	
		$1,743,254 68

Summary of Financial Statement of the Niagara System Operation for the fiscal year 1916-17:

Receipts

Power delivered, including charges for Administration, General Expense, Operation, Maintenance and Interest	$2,637,606 31

Disbursements

Power purchased, including losses in Transmission and Transformation, Administration, General Expense, Operation, Maintenance and Interest	2,150,666 81
Surplus applicable to Sinking Fund and Depreciation Reserve Account	$486,939 50

SEVERN SYSTEM

The power demand of the municipalities served from the Severn System increased 53 per cent. over that supplied during the year 1916. Parallel operation of the generating stations at the Big Chute, Eugenia and Wasdell's Falls enabled the Commisssion to meet the increased demand and to provide first-class service with regard to character and continuity.

No serious failures of equipment occurred in the generating station or transformer stations from lightning discharges or other causes. The transmission lines were carefully gone over during the summer and the spans sags adjusted, poles straightened and backfilled where necessary.

Negotiations were completed for the purchase from the Orillia Water and Light Commission of the seven and one-half miles of 22,000-volt single, three-phase circuit of No. 2 aluminum conductor extending from the Big Chute plant to a point approximately south of the Orillia Commission's new hydraulic power house, at Swift Rapids. From this point a circuit of No. 3/0 aluminum cable will be erected to the Swift Rapids plant, a distance of five-eighths of a mile. This tap will form the permanent connection between the Big Chute and Swift Rapids plants, thereby completing the link between the Severn and the Wasdell's System by the use of the Orillia Commission's lines as per arrangements by contract.

To facilitate operation and maintenance the switching structure at the point where the Victoria Harbor tap line branches from the trunk lines was remodelled and the single pole disconnecting switches were replaced with two-pole switches in order that the Victoria Harbor tap might be switched to either of the trunk lines at the junction point.

Another improvement of this nature was effected by the erection of two horn-gap, air-break switches in the two main 22,000-volt lines near the Village of Elmvale for sectionalizing purposes. Two three-phase disconnecting switches were erected on the System switching structure at Waubaushene, so that the local distributing station could be served from either of the main lines at this point. A three-phase, air-break line disconnecting switch was erected on a pole structure outside of the Victoria Harbor sub-station to act as an incoming line switch at this station.

The extra right-of-way purchased along the transmission line between the Port McNicoll Junction and the Canadian Pacific Railway elevator was cleared of trees.

Switching and transformer equipment was installed at the Big Chute power house, and a small 2,200-volt distribution system was erected to supply the Department of Railways and Canals with power and light for the marine railway installed at the Big Chute plant. This system was put into commercial operation about the middle of October, 1917.

In the latter part of August the service from the original Midland station was discontinued, and resumed from the new distributing station erected adjacent to the municipality's waterworks station.

The two pole line entrance structure at the Collingwood distribution station was remodelled so as to accommodate double circuit lines from the Severn and single circuit lines from the Eugenia Systems, and also the outgoing 2,200-volt distributing circuits.

Severn System

Municipality.	Load in H.P. 1916	Load in H.P. Oct., 1917	Increase in H.P.
Midland	815	1080.5	265.5
Penetang	495	435.6	.....
Collingwood	888.7	1986	1097.3
Barrie	541.5	487.2	.....
Coldwater	34.8	36.8	2
Elmvale	36.2	47	.8
Stayner	56.3	54	.....
Creemore	38.8	47	8.2
Orillia	1414	2111	697
Waubaushene	16.8	22.7	5.9
Port McNicoll	19.3	34	4.7
Victoria Harbor	26.8	28.4	1.6
Camp Borden	325.7	323	.....
C. P. R. Elevator	1176.6	1160.1	.....

Severn System

Operating Statement, Fiscal Year 1916-17.

Capital Investment as at October 31, 1917:

Big Chute Power Development, including Generating and Transformer Station	$350,713 28
Transmission Lines	348,520 12
Distributing Stations	82,861 13
Total Operating Capital	$782,094 53

Total Expenditures in connection with the Operation and Maintenance of the Severn System for the fiscal year 1916-17:

Operators' and Patrolmen's Salaries and Expenses, and proportion of Administration and General Office Expense	$31,041 21
Cost of Power purchased from Wasdell's and Eugenia Systems	58,917 45
Interest on Capital Investment	32,364 54
	$122,323 20

Summary of Financial Statement of the Severn System Operation for the fiscal year 1916-17:

Receipts

Power delivered, including charges for Administration, General Expense, Operation, Maintenance and Interest	$172,792 75

Disbursements

Power purchased, including losses in Transmission and Transformation, Administration, General Expense, Operation, Maintenance and Interest	122,323 20
Surplus applicable to Sinking Fund and Depreciation Reserve Account	$50,469 55

EUGENIA SYSTEM

The second year's operation of the Eugenia System was successfully concluded on November 18, 1917, with very bright prospects for the future. The quality of service supplied was exceptionally good, the operating characteristics of the equipment in the generating and transformer stations meeting the manufacturer's guarantees very satisfactorily.

The Eugenia generating station continued to assist the Big Chute plant to supply the increased demand of the municipalities of the Severn System with any surplus capacity not required by the municipalities of the Eugenia System. The average credit in horsepower to the Eugenia System in this respect was 1,635.

The Grand Valley distributing station was made alive December 1st. This station is fed over a 22,000-volt No. 6 copper circuit from a tap off the feeder to Orangeville at Laurel Junction. The villages of Grand Valley and Arthur are served from this station with 4,000-volt power. The new distributing stations at Orangeville and Shelburne were placed in operation on February 11th and November 26th respectively. Service was formerly supplied to these customers from the old sub-stations taken over with the Pine River System.

The comparatively new transmission lines of this system were gone over carefully and the span sags adjusted and the poles backfilled and tree trimming done by the line maintenance department where necessary.

The out-going 22,000-volt lines on the pole structure at the power house were removed to conform with some alterations which were made in the high-tension equipment of the station to properly control the tie line from the Eugenia to the Severn System. To benefit operation and maintenance of the south and west portions of the system the telephone line between the power house and the Village of Flesherton was double circuited by the erection of another circuit of No. 9 iron wire. This allows for a separate telephone circuit for the south and the west parts of the system.

Flashboards were installed on the dam to give additional storage and a motor boat was purchased for maintenance use on the storage basin. Plans have been prepared for a suitable barn to be erected near the power house to properly accommodate the transportation equipment in use at this point. Considerable lumber on the Commission's property is available for this work. A water supply was provided for the operators' cottages by piping to a boxed spring on the escarpment. The approach to the power house from the south was refilled and put in good condition.

Eugenia System

Municipality	Load in H.P. 1916	Load in H.P. Oct., 1917	Increase in H.P.
Owen Sound	992	978.5	.....
Flesherton	36.2	33.5	.....
Dundalk	50.2	75.3	25.1
Durham	63.9	60.3	.....
Mount Forest	98.5	106.2	7.7
Chatsworth	25.4	15.2	.....
Markdale	60	73	13
Holstein	6.9	6.4	.....
Chesley	80.4	90	9.6
Shelburne	51.2	94.7	43.5
Orangeville	128.7	94.5	.....
Horning's Mills	5	4.7	.....

Municipalities connected during the year 1917.

Municipality.	Date connected.	Initial Load in H.P.	Load in H.P. 1917	Increase in H.P.
Grand Valley	Dec. 1, 1916	20	41.5	21.5
Arthur	Dec. 1, 1916	25	41	16

Eugenia System

Operating Statement, Fiscal Year 1916-17.

Capital Investment as at October 31, 1917:

Eugenia Falls Power Development and Generating Plant	$646,856 32
Distributing Stations	72,857 09
Transmission Lines	470,718 72
Total Operating Capital	$1,190,432 13

Total Expenditures in connection with the Operation and Maintenance of the Eugenia System for the fiscal year 1916-17:

Operators' and Patrolmen's Salaries and Expenses, and proportion of Administration and General Office Expense	$25,473 35
Interest on Capital Investment	55,762 04
	$81,235 39

Summary of Financial Statement of the Eugenia System Operation for the fiscal year 1916-17:

Receipts

Power delivered, including charges for Administration, General Expense, Operation, Maintenance and Interest	113,169 89

Disbursements

Operation, Maintenance, Administration, General Office Expense and Interest	81,235 39
Surplus applicable to Sinking Fund and Depreciation Reserve Account	$31,934 50

WASDELL'S SYSTEM

The operation of the Wasdell's Station during the past year was attended with good results. The increase of the municipalities' load, while not large, compared very favorably with that of corporations of the same population on the other systems.

The surplus capacity of the generating station was constantly required on the Severn System. Reports show that the system is in excellent operating condition, with no indication of excessive depreciation.

At the power house an addition was made to the switchboard to provide metering and protective equipment on the tie line between the power house and the Severn System. Several minor improvements were carried out by the operators at the power house, such as painting the floors, iron work, etc. A telephone booth

was erected and the telephone equipment installed to conform with the standard employed on the other systems. A three-phase horn-gap air-break, 22,000-volt disconnecting switch was erected in the Beaverton tap, near the junction, for sectionalizing purposes.

A small barn was erected at the power house to house the transportation equipment; also a small building to serve as a machine shop for maintenance repairs. Further storage space for stock was obtained by laying a floor over a part of the gate house.

Wasdell's System

Municipality.	Load in H.P. Oct., 1916	Load in H.P. Oct., 1917	Increase in H.P.
Beaverton	56.3	60.3	4
Brechin	36.2	53.6	17.4
Cannington	57.6	68.4	10.8
Sunderland	52.2	41.5	.....
Woodville	48.2	51.2	3

Wasdell's System

Operating Statement, Fiscal Year 1916-17.

Capital Investment as at October 31, 1917:

Wasdell Power Development and Generating Plant	$139,912 96
Distributing Stations	14,519 90
Transmission Lines	110,298 41
Total Operating Capital	$264,731 27

Total Expenditures in connection with the Operation and Maintenance of the Wasdell System for the fiscal year 1916-17:

Operators' and Patrolmen's Salaries and Expenses, and proportion of Administration and General Office Expense	$7,372 03
Interest on Capital Investment	11,085 45
	$18,457 48

Summary of Financial Statement of the Wasdell System Operation for the fiscal year 1916-17:

Receipts

Power delivered, including charges for Administration, General Expense, Operation, Maintenance and Interest	$28,008 48

Disbursements

Operation Maintenance, Administration, General Office Expense and Interest	18,457 48
Surplus applicable to Sinking Fund and Depreciation Reserve Account	$9,551 00

CENTRAL ONTARIO SYSTEM

During the past year the load on the Central Ontario System has steadily increased until in October it reached the highest peak in the history of its operation.

Extremely favourable river flow continued on the Trent River, enabling all loads to be carried without difficulty. Practically no serious interruptions occurred during the year. Probably the worst interruption was on April 6th, which was due to a snow and sleet storm, which so heavily loaded the wires that a large number of breaks were made, and service was disorganized to all towns at any distance from the generating plants.

Fortunately this trouble occurred on Good Friday, so that factories depending on the Commission's service did not suffer to any great extent.

A number of extensions have been made in the Commission's plants at various places, more particularly in the nature of refinement and improvements to the system, to enable the increasing difficulties of operation under war conditions to be met.

Power Generated

Month	1916 Peak Load H.P.	1917 Peak Load H.P.	Increase H.P.
November	17,800	20,800	300
December	18,150	21,700	3,550
January	16,150	21,500	5,350
February	13,720	18,600	4,880
March	13,750	19,320	5,570
April	12,630	17,500	4,870
May	12,620	17,400	4,780
June	15,330	17,210	1,880
July	15,580	18,200	2,620
August	15,820	20,200	4,380
September	16,480	21,500	5,020
October	18,570	24,440	5,870

Load Report

Municipality	Load in H.P. October, 1916	Load in H.P. October, 1917	Increase H.P.
Bowmanville	1,247	1,140	107*
Belleville	1,434	1,513	79
Brighton	72	90	18
Cobourg	502	522	20
Colborne	75	80	5
Deseronto	302	355	53
Lindsay	1,062	1,540	478
Millbrook	38	31	7*
Napanee	315	275	40*
Newcastle	20	24	4
Newburgh and Camden East	.....	295	295
Oshawa	1,568	1,815	247
Orono	20	24	4
Peterboro	3,067	4,020	953
Port Hope	375	435	60
Stirling	75	80	5
Trenton	670	4,800	4,130
Tweed	87	127	40
Whitby	217	260	43

*Decrease.

MUSKOKA SYSTEM

During the second year's operation of the Muskoka System, the Commission was able to improve the service supplied its customers very materially by further improvements of the equipment in the generating station.

It was deemed advisable to completely re-wind the armature of the old 450-K.V.A. generator formerly in operation at the power house. A gate house was erected and repairs and alterations were made to the gate and stop log operating mechanism. The necessary transformers, heaters and wire were purchased and installed for the purpose of heating the gate house.

The section of the 6,600-volt line to Gravenhurst between the power house and limits of Muskoka Falls village was remodelled and a lighting system, for the power house roadway, pipe lines and dam was erected on the poles of this feeder from the power house to the gate house. This work also included alterations to the distribution system for the village.

Two sets of line disconnecting switches were installed at Bracebridge and Utterson in the 22,000-volt line from the power house to Huntsville, for sectionalizing purposes. The line maintenance gang did considerable tree trimming and made all necessary line adjustments.

Muskoka System

Municipality	Load in H.P. Oct., 1916	Load in H.P. Oct., 1917	Increase in H.P.
Gravenhurst	235	321.7	86.7
Huntsville	580	597.8	17.8

Muskoka System

Operating Statement, Fiscal Year 1916-17.

Capital Investment as at October 31, 1917:	
South Falls Power Development and Generating Plant	$127,106 43
Distributing Station	8,916 35
Transmission Line	53,203 77
Total Operating Capital	$189,226 55
Total Expenditures in connection with the Operation and Maintenance of the Muskoka System for the fiscal year 1916-17:	
Operators' and Patrolmen's Salaries and Expenses, and proportion of Administration and General Office Expenses	8,383 03
Interest on Capital Investment	8,368 67
	$16,751 70
Summary of Financial Statement of the Muskoka Operation for the fiscal year 1916-17:	
Receipts	
Power delivered, including charges for Administration, General Expense, Operation, Maintenance and Interest	$19,815 27
Disbursements	
Operation, Maintenance, Administration, General Office Expense and Interest	16,751 70
Surplus applicable to Sinking Fund and Depreciation Reserve Account	$3,063 57

ST. LAWRENCE SYSTEM

The operation of the St. Lawrence System was attended with very satisfactory progress. The municipal power demands show material increases. Parallel operation of the Municipal steam plant at Brockville with the M. F. Beach Company's hydraulic plant at Iroquois was continued throughout the year with good results. The Commission has proceeded with arrangements for the supply of a sufficient quantity of power to meet the requirements of the system for some years to come.

The transformer stations and the transmission lines required no special maintenance during the year. One of the Pittsburgh Company's 26,400-volt, 250-K.V.A. transformers which was taken over from the New York and Ontario Power Company in a damaged condition, when the sub-station at Iroquois was purchased, was rebuilt and placed in operation.

St. Lawrence System

Municipality.	Load in H.P. Oct., 1916	Load in H.P. Oct., 1916	Increase in H.P.
Brockville	348.5	368.5	20
Prescott	217	191.3	.....
Winchester	58.9	69.7	10.8
Chesterville	48.2	87.8	39.6
Williamsburg	17.4	21	3.6

St. Lawrence System

OPERATING STATEMENT, FISCAL YEAR 1916-17.

Capital Investment as at October 31, 1917:

Distributing Stations	$30,009 96
Transmission Lines	147,612 62
Total Operating Capital	$177,622 58

Total Expenditures in connection with the Operation and Maintenance of the St. Lawrence System for the fiscal year 1916-17:

Operators' and Patrolmen's Salaries and Expenses, including Operating Supplies, and proportion of Administration and General Office Expense	$2,437 79
Interest on Capital Investment	7,570 47
Cost of Power purchased	6,101 90
	$16,110 16

Summary of Financial Statement of the St. Lawrence System Operation for the fiscal year 1916-17:

Receipts

Power delivered, including charges for Administration, General Office Expense, Operation, Maintenance and Interest	$20,712 44

Disbursements

Power purchased, Operation, Maintenance, Administration, General Office Expense and Interest	16,110 16
Surplus applicable to Sinking Fund and Depreciation Reserve Account	$4,602 28

OTTAWA SYSTEM

The total load taken by the Hydro-Electric System of Ottawa for the past year shows an increase of 607 horse-power over that of the year 1916, and very satisfactory progress is reported. The power supplied by the Ottawa and Hull Power and Manufacturing Company was of unusual merit with regard to operating features.

The power supplied to the municipality under the temporary contract, since June, 1916, for the operation of the Queen street pumping station will be discontinued very shortly, when the new pumping station at Lemieux Island is placed in service. This station is now ready for test and will be put into regular operation in the middle of November and will require approximately 1,700 horse-power. The new pumping station is fed direct from the power company's generating station *via* submarine cable at 11,000 volts.

In order to supply the additional power required by the waterworks department, the Commission has placed an order with the Power Company under the original contract, for three blocks of 500 horse-power each, making a total on order of 6,500 horse-power. The Power Company has accepted the Commission's order and has agreed to the cancellation of the temporary contract for the Queen street pumping station power supply, this contract to automatically expire on the date that the Lemieux Island plant is placed in regular operation.

The Commission has completed arrangements for the installation of the necessary metering equipment at the Power Company's generating station to provide totalizing graphic records of the power delivered to the municipal electric department and to the new waterworks station and also to provide a separate record of the load taken by the latter station.

PORT ARTHUR SYSTEM

The past year's operation of the Port Arthur System was very satisfactory. The recovery of industrial undertakings and business expansion has shown a marked effect on the power demand, with the result that the Commission will find it necessary to provide several additional blocks of power from the Kaministiquia Power Company to cope with the situation in the coming winter. From a recent survey of the industrial prospects in this vicinity it is estimated that the peak load demand of the City of Port Arthur will approximate 10,000 horse-power within the next few years.

The Commission received first-class service from the Kaministiquia Power Company during the year and the joint operation of the Commission's system with the municipality's Current River station was carried out very successfully.

During the year the Commission proceeded with the erection of a wood-pole entrance and switching structure for the purpose of sectionalizing the two 22,000-volt outgoing lines to the grain elevators and to the waterworks station, thereby greatly benefiting the operating facilities of the high-tension portion of the system.

Port Arthur System

OPERATING STATEMENT, FISCAL YEAR 1916-17.

Capital Investment as at October 31, 1917:

Transmission Lines	$88,118 72
Transformer Stations	21,319 45
Total Operating Capital	$109,438 17

Total Expenditures in connection with the Operation and Maintenance of the Port Arthur System for the fiscal year 1916-17:

Operators' Salaries and Expenses, including Operating Supplies, and proportion of Administration and General Office Expense	$6,691 30
Interest on Capital Investment	6,012 19
Cost of Power	38,487 63
	$51,191 12

Summary of Financial Statement of the Port Arthur System Operation for the fiscal year 1916-17:

Receipts

Power delivered, including charges for Administration, General Expense, Operation, Maintenance and Interest	$56,468 28

Disbursements

Power purchased, Operation, Maintenance, Administration, General Office Expense and Interest	51,191 12
Surplus applicable to Sinking Fund and Depreciation Reserve Account	$5,277 16

TOTAL CAPITAL INVESTMENT TO OCTOBER 31, 1917

Following is a statement of expenditures on Capital Account, including Niagara, Severn, St. Lawrence, Wasdell, Eugenia, Muskoka, Port Arthur, Renfrew, Ottawa, Central Ontario, and Ontario Power Co. Systems, Central Construction Rural, Miscellaneous Power Development, Farms Account, Stock on Hand, Tools and Equipment, Municipal Construction.

Niagara System

Transmission Lines Operating:		
Right-of-Way	$1,115,779 81	
Steel Tower Lines	3,317,432 39	
Telephone Lines	129,706 69	
Relay System Lines	54,537 32	
Wood Pole Lines	2,077,156 36	
		$6,694,612 57
Transmission Lines, in course of construction:		
Right-of-Way (Dundas-Toronto)	$208,545 04	
Steel Tower Lines	480,167 90	
Telephone Line (Section A)	2,970 82	
Wood Pole Lines	200,170 19	
		891,853 95
Rural Line Construction	$481,013 85	
		481,013 85
Transformer Stations:		
Stations Operating	$2,994,107 55	
Conduit System (Ontario Power Co. to Niagara Station)	292,859 75	
Stations and Extensions to same, in course of construction	297,868 48	
		3,584,835 78
Distributing Stations Operating	$267,547 07	
Distributing Stations in course of construction	89,979 80	
		357,526 87
Chippawa Development	$2,376,688 25	
		2,376,688 25
		$14,386,531 27

Severn System

Big Chute Power Development, including Generating and Transformer Stations	$350,713 28	
Big Chute Power Development Extensions in course of construction	10,791 77	
		$361,505 05
Transmission Lines	$348,520 12	
Transmission Lines in course of construction	59,294 15	
		407,814 27
Distributing Stations	$82,861 13	
Distributing Stations in course of construction	15,790 91	
		98,652 04
		$867,971 36

Eugenia System

Power Development, including Generating and Transformer Station	$646,856 32	
Power Development Extension, in course of construction	11,496 63	
		$658,352 95
Transmission Lines	$470,718 72	
Transmission Lines, in course of construction	31,940 81	
		502,659 53
Distributing Stations	$72,857 09	
Distributing Stations, in course of construction	37,866 54	
		110,723 63
		$1,271,736 11

Wasdell's System

Power Development, including Generating and Transformer Station	$139,912 96	
Transmission Lines	110,298 41	
Distributing Stations	14,519 90	
		$264,731 27

Muskoka System

South Falls Power Development, including Generating and Transformer Station	$127,106 43	
		$127,106 43
Transmission Lines	$53,203 77	
Transmission Lines Extension, in course of construction	1,013 25	
		54,217 02
Distributing Stations		8,916 35
		$190,239 80

St. Lawrence System

Transmission Lines	$147,612 62	
Transmission Lines, in course of construction	19,805 52	
		$167,418 14
Distributing Stations	$30,009 96	
Distributing Stations, in course of construction	3,882 17	
		33,892 13
Revenue (Renewals Reserve Shortage)		5,924 03
		$207,234 30

Ottawa System

Meter Equipment	$432 39	
		$432 39

Port Arthur System

Transmission Lines	$88,118 72	
Transformer Stations	21,319 45	
		$109,438 17

Renfrew System

Round Lake Storage Dam	$20,389 43	
		$20,389 43

Central Ontario System

Power Development	$4,012,560 56	
Power Development Extension, in course of construction	60,020 66	
		$4,072,581 22
Transmission Lines	$998,848 22	
Transmission Lines, in course of construction	302,557 87	
		1,301,406 09
Transformer Stations	$830,322 73	
Transformer Stations, in course of construction	9,384 27	
		839,707 00
Stores, Tools and Equipment		109,850 90
General Sales		66,987 98
Local Systems Capital Expenditure		3,114,716 30
		$9,505,249 49

Ontario Power Company

Capital Stock	$7,984,000 00	
Current Account	12,617 42	
		$7,996,617 42

General Accounts

Municipal Construction Work repayable	$413,911 04	
Sales to Municipalities	221,523 52	
Bonnechere District Operating Charges	3,701 25	
		$639,135 81

General Accounts (Capitalized)

Office Furniture, Equipment, Stationery, etc.	$80,380 28	
Office Furniture and Equipment, Electrical Inspection Department	3,172 46	
Service Buildings (Storehouses, Laboratory, Garage, Machine Shop, etc.)	250,741 00	
Automobiles and Trucks (depreciated value)	114,179 63	
Administrative Office Building	467,264 16	
Electrical Railway Projects	28,345 45	
Central Rural Line Construction	10,421 39	
Power Development, Monteith District	1,333 00	
Farms Account	1,164 44	
		$957,001 81

Stores, Tools and Equipment

Stores on hand for Construction Purposes and Sale to Municipalities	$453,615 86	
Line Maintenance Stock for all Systems	64,354 29	
		$517,970 15
Operating Departments, Testing and Metering Equipment for all Systems	$4,053 71	
Line and Station Construction Tools and Equipment	5,579 00	
Line and Station Maintenance Tools	8,572 67	
Hydraulic Construction Tools	2,011 01	
First Aid Outfits	79 40	
		$20,295 79
Laboratory Operation (incomplete production orders)	$431 95	
		$431 95
Ontario Government (Sinking Fund)	$221,494 47	
		$221,494 47
Grand Total		$37,176,900 99

PROVINCIAL EXPENDITURES

Fiscal Year 1916-17

Engineering assistance to non-operating municipalities for the gathering of data throughout the Province for statistical purposes; reports on Municipal Operation	$23,839 57	
Municipal estimates for power supply, non-operating Municipalities, and also rate investigations	1,801 88	
Hydrographic surveys, storage surveys, reports and investigations on power sites and stream flow for the Province	41,926 58	
Engineering investigations, surveys and reports on proposed Municipal Electric Railways	37,909 76	
Demonstration at Rural and Urban Fairs	2,045 60	
Administration and general office expenses	11,746 23	
	$119,269 62	
Less:		
Credits:—For engineering services in connection with preliminary survey for the Niagara System High Tension Lines and Stations, office furniture and equipment, together with interest accrued to October 31, 1917, charged to Province former years, but now capitalized in Commission's books	$61,933 15	
		$57,336 47
Electrical Inspection—Balance of operating expenses for the year, exclusive of capital investment, such as furniture, typewriters, etc., which is carried forward		39,771 48
Special Hydrographic Investigations—Grand River and Lake of the Woods Districts; Reports on Crown Leases, etc., for the Department of Lands and Mines; also inspection of power at Niagara Falls		7,746 21
Expenditures on account of Hydraulic Equipment		1,372 65
		$106,226 81

BALANCE SHEET

OCTOBER 31, 1917

Assets

Sundry Expenditures, per list	$37,176,900 99	
Warrantable Advances	69,510 83	
Unpaid Power Bills, October 31, 1916	451,890 47	
Unpaid Rural Power Bills, October 31, 1916	37,319 53	
Cash on hand	68,651 33	
		$37,804,273 15

Liabilities

Provincial Treasurer	$17,002,720 91	
" " Central Ontario System	9,900,000 00	
" " Niagara Power Development	1,200,000 00	
Debentures, Ontario Power Co.	7,984,000 00	
" Gravenhurst	45,789 00	
" Streetsville	5,427 97	
Interest	119,553 58	
		$36,257,491 46

Systems Reserves Applicable to Sinking Fund and Renewals:

Niagara System	$1,050,536 15	
Severn "	98,072 76	
Wasdell "	15,035 09	
St. Lawrence System	14,864 78	
Port Arthur "	28,069 56	
Eugenia "	18,582 07	
Muskoka "	2,151 31	
Central Ontario System Surplus	212,744 60	
		$1,440,056 32

Service Buildings Reserves applicable to Sinking Fund and Renewals:

Storehouse	$70,561 76	
Laboratory	6,433 77	
Machine Shop	6,610 51	
Garage	720 57	
Administration Building	9,482 67	
		93,809 28
Rural Reserves	$8,863 01	
Insurance Fund	3,792 23	
Balance on Cable Reel Account	260 85	
		12,916 09
		$37,804,273 15

MUNICIPAL ACCOUNTS

The results in the municipalities of the co-operative distribution of Hydro power are shown in the tables submitted in this section. In accordance with the requirements of the Ontario Government the municipal year ends on December 31st. The tables which follow under "Municipal Accounts" cover the calendar year ending December 31st, while other sections of the annual report deal with the fiscal year ending October 31st.

The work of standardizing the electrical accounts of the Hydro-Electric municipalities, commenced in 1912, has been continued. During the year accounting systems were established in Arthur, Burgessville, Dublin, Grand Valley, Huntsville, Hensall, Forest, Rodney, Springfield, St. Jacob's, Tavistock, Watford, West Lorne and Wellesley, and the local officers instructed in the proper handling of the books.

A periodical inspection has been made of the electrical accounts of all Hydro-Electric municipalities, our accountants assisting the local officers by suggesting improved methods of office routine, and in the case of smaller towns and villages, where the utility is in charge of men of little bookkeeping experience, actually doing most of the accounting.

A system of monthly balance sheets and operating reports enables the Provincial Commission to keep in close touch with local conditions, and from the reports and other data collected and worked up by the auditors, the capital expenditure and operating expenses are periodically divided into the principal revenue accounts, lighting, commercial power, municipal power and street light, these in turn being set against the respective revenues for the purpose of rate adjustment.

This data enables this Commission to authorize and enforce a schedule of selling rates in each municipality, which makes each of the above-named revenue departments self-supporting, so that an excessively high rate in one does not take care of a deficit in another.

The seven statistical reports which follow show the result of operation and the present status of the electric utilities in the one hundred and forty-three municipalities in which the service has been installed long enough to justify a report.

The municipalities have been listed in the order of their size according to Municipal Bulletin No. 10, Bureau of Industries of the Ontario Department of Agriculture; the populations are shown and the statistics permit an intelligent comparison of operating results in municipalities where conditions are similar. This is resulting in a friendly rivalry between the municipalities for an increased load, an efficient and economical administration, and an intelligent effort to improve the load factor, which is so essential to low selling rates.

Statement "A" is a comparative condensed balance sheet of each municipality as at December 31st, 1916, and December 31st, 1917, showing the plant cost in logical subdivisions, and other items making up the total assets. The true or quick liabilities, such as debenture balance, bank overdraft and accounts payable, are totalled separately before including such reserve accounts as debentures paid, sinking fund reserve, depreciation reserve and surplus. In this way the relative increase in plant value and net debt during the year in any municipality can be quickly determined.

The percentage of net debt to plant cost at the end of each year has been worked out, and shows a marked decrease. The percentage dropped in 1917 from

78.4 per cent. to 75.5 per cent. Special attention is called to this very interesting and gratifying feature.

All of the accounts appearing in the balance sheet under "Reserves," such as "Debentures Paid," "Sinking Fund Reserve," "Depreciation Reserve," and "Surplus," might properly be called surplus and represent the gross profit from operation.

While a proper depreciation charge has been included in the operating expenses from the beginning, the plant extensions resulting from the growth of the service have in most cases absorbed most of the depreciation funds. A proper accounting has been kept of this, and interest credited the Depreciation Reserve on the funds so used. A characteristic feature of the operation during the past two years has been a steady increase in the cash balances, which in some cases now amount to more than 25 per cent. of the total plant cost, notwithstanding the constant reductions in selling rates. Many commissions have loaned cash to the municipalities, and surplus funds to the amount of $64,346.00 have been invested in Canadian War Loans, an innovation unique in the operation of civic utilities.

Statement "B" is a condensed operating report for the year ending December 31st, 1917, showing the result in each municipality. The population and the number of consumers in each class is also given to facilitate comparisons. In some cases where the power was turned on subsequent to January 1st, the proportion of the annual fixed charges corresponding to the period of operation has been used, and in other municipalities where the operation covers a very short period, and no actual payment has been made, the fixed charges have been omitted entirely to simplify the accounting in future years and avoid the necessity for annual adjustments.

The cost of the service, which is the basis on which service is billed to the consumers, includes every possible loading, i.e., cost of power, operation, maintenance, administration, interest and sinking fund payments on debenture debt, and in addition the sinking fund equivalent of a 5 per cent. straight line depreciation charge. No utility is considered to be on a satisfactory basis until the revenue is sufficient to meet this burden. The rate of depreciation, however, is subject to modification to meet unusual conditions such as large investments for land or perpetual water rights—concrete construction, unusual types of overhead or underground construction or short term debentures.

A study of Statement "B" will show that of the 143 municipalities reported, the revenue in 136 was sufficient to take care of all operating and fixed charges and depreciation, in ten others the fixed charges and part depreciation were met, and in seven only was there an actual loss. The gross loss in the seven municipalities failing to meet their expenses amounted to $6.909.23. Of this total $6,135.98 was due to the abnormal cost of operating a steam plant at Brockville, where but a limited amount of Hydro power was available; $594.87 at Durham was due to delay in securing equipment to serve a large cement plant, leaving a balance of $178.38 distributed among five police villages. The net credit balance of surplus from the year's operation in 143 municipalities, amounted to $385,367.80, and the systems are now serving 170.916 customers, and a population of approximately 1,168,000.

Statement "C" shows in detail the comparative revenue and expenses in each municipality for the past five years. This shows graphically the increase in business year by year and the gradual decrease in the proportion of revenue contributed by the municipal utilities. In comparing the cost of power purchased, the

varying price paid per horse-power must be taken into consideration. This schedule will be found in Statement "F."

Statement "D" shows for each municipality for each year of operation, the number of consumers served with light and power, the average monthly kw. hr. consumption, the average net cost per kw. hr., and the average net monthly bill. This is a tabulation of data built up on information not originally obtained for this purpose, and subject to errors, but the averages are substantially correct and show the constantly increasing monthly consumption and decreasing net cost per kw. hr. and average monthly bill, and reflects the satisfactory nature of the service from the standpoint of the consumer. The approximate net average cost per horse-power per year to power consumers is also shown for 1917.

Statement "E" shows the approximate installation and annual cost per lamp of the street lights in service in cities, towns and villages where Hydro service has been installed. An interesting feature is the annual cost per capita based on the total populations.

Statements "F" and "G" show comparatively the cost of power to the municipalities, the selling rates for power and light in 1917, and the recommended rates for 1918.

In order that the effect of the Hydro co-operative scheme on the Hydro municipalities as a whole may be clearly shown, the operation for the past six years of all municipalities has been consolidated into one report, likewise the balance sheets for five years. These consolidated reports show the sound financial condition of the enterprise from the municipal standpoint and meet every criticism against municipal ownership and operation of electric utilities as carried on under the control of the Commission. Particular attention is called to the steady decrease in the percentage which the net debt balance bears to the total assets each year.

CONSOLIDATED OPERATING REPORTS

—	1912	1913	1914	1915	1916	1917
Number of Municipalities included	28	45	69	99	128	143
EARNINGS						
Domestic Light		$572,154 38	$789,130 81	$944,271 08	$1,172,878 96	$1,417,460 31
Commercial Light		525,438 16	673,803 92	720,209 26	812,130 78	899,023 72
Power		905,378 17	1,214,829 31	1,501,797 78	1,921,152 31	2,665,280 65
Street Light		560,925 56	698,409 71	835,970 87	930,057 48	967,495 10
Miscellaneous		53,543 24	57,482 41	68,046 29	147,381 50	120,805 39
Total	$1,617,674 00	$2,617,439 51	$ 3,433,656 16	$ 4,070,295 28	$ 4,983,601 03	$6,070,065 17
EXPENSES						
Power Purchased		$789,632 87	$1,045,752 65	$1,485,614 73	$1,959,446 83	$2,563,880 17
Sub-Stn. Operation		78,394 81	97,658 90	107,607 31	153,761 08	203,091 20
" " Maintenance		18,698 46	31,790 99	25,935 56	46,131 53	42,129 04
Dist. System, Operation and Maintenance		104,114 51	130,998 65	154,409 71	154,247 17	169,326 24
Line Transformer Maintenance		8,547 61	11,764 32	11,508 92	14,528 17	25,328 95
Meter		5,222 19	9,536 07	12,899 14	24,218 48	44,461 55
Consumers' Premises—Expenses		53,108 38	65,192 23	47,494 26	52,602 01	61,765 14
Street Light System, Operation and Maintenance		84,903 76	113,047 80	136,983 38	145,471 50	157,857 73
Promotion of Business		72,303 51	86,683 02	74,402 55	79,324 85	73,516 37
Billing and Collecting		77,351 76	103,560 71	131,541 27	154,508 58	188,083 84
General Office, Salary and Expenses		154,932 69	230,899 75	236,777 86	306,709 35	349,932 05
Undistributed Expenses		64,538 69	81,261 28	94,978 89	88,646 53	79,462 36
Interest and Debenture Payments		528,549 21	662,092 34	817,978 89	951,781 99	1,085,180 80
Miscellaneous Expenses		884 95	8,089 63	34,230 26	8,687 44	23,476 44
Total Expenses	$1,377,168 00	$2,041,183 40	$ 2,678,328 34	$ 3,371,414 00	$ 4,140,065 51	$5,077,491 08
Surplus	$240,506 00	$576,256 11	$ 755,327 82	$ 698,881 28	$ 843,535 52	$ 992,574 09
Depreciation Charge	$124,992 47	$262,675 24	$ 357,883 31	$ 414,506 99	$ 486,141 80	$ 607,296 29
Surplus Less Depreciation Charge	$115,513 53	$313,580 87	$ 397,444 51	$ 284,374 29	$ 357,393 72	$ 385,367 80

CONSOLIDATED BALANCE SHEETS

Year ending December 31st	1913	1914	1915	1916	1917
Number of Municipalities included	45	69	99	128	143
ASSETS—Lands and Buildings	$ 626,707 34	$ 791,732 20	$ 873,838 18	$ 1,335,936 33	$1,546,241 41
Sub-Station Equipment	1,090,875 69	1,476,087 84	1,582,062 56	1,934,626 12	2,471,293 82
Distribution System, Overhead	2,690,834 74	3,422,763 93	4,234,626 05	4,832,353 27	6,080,073 42
" " Underground	644,514 24	807,153 53	928,420 77	1,095,709 62	1,157,059 90
Line Transformers	615,546 20	787,613 52	981,754 70	1,179,132 07	1,483,839 44
Meters	840,606 64	1,172,475 11	1,418,165 08	1,711,299 49	1,999,095 48
Street Lighting Equipment, Regular	900,614 80	1,071,255 37	1,309,628 49	1,251,057 13	1,237,734 69
" " " Ornamental	62,765 34	270,386 55	197,644 82	306,388 95	361,975 74
Miscellaneous Equipment and Const. Exp.	866,551 89	2,062,035 90	1,701,182 66	2,059,263 42	2,184,015 84
Steam or Hydraulic Plant	1,401,175 28	420,108 33	461,651 60	864,500 01	896,753 20
Old Plant and Miscellaneous	341,277 00	619,513 12	1,184,372 86	759,748 66	649,852 51
Total Plant	$10,081,469 16	$12,901,125 40	$14,873,347 77	$17,330,015 07	$20,077,935 45
Bank and Cash Balance	$ 450,887 97	$ 422,350 12	$ 284,653 96	$ 1,061,029 90	$ 340,026 50
Inventories	344,487 95	561,873 08	602,920 69	695,152 23	1,285,097 33
Accounts Receivable	540,274 58	615,226 76	726,556 76	764,504 59	1,261,398 36
Sinking Fund	431,747 27	625,217 03	868,983 78	1,166,017 73	1,337,578 96
Other Assets	58,959 93	123,410 97	326,801 11	342,215 87	125,240 05
Total Assets	$11,907,826 86	$15,249,203 36	$17,683,264 07	$21,358,935 39	$24,427,276 65
LIABILITIES—Debenture Balance	$ 8,711,308 37	$10,678,078 36	$11,831,811 03	$15,058,641 57	$15,593,773 61
Accounts Payable	1,553,711 45	1,682,150 29	2,040,038 01	969,187 75	1,537,669 11
Bank Overdraft	160,919 16	228,622 50	292,106 44	178,413 26	886,177 94
Other Liabilities	42,412 81	113,838 66	37,388 31	491,874 90	429,104 20
Total Liabilities	$10,468,351 79	$12,702,689 81	$14,201,343 79	$16,698,117 48	$18,446,724 86
RESERVES—Debentures Paid	$ 202,751 26	$ 320,129 10	$ 394,466 22	$ 549,778 59	$ 694,797 90
Sinking Fund Reserve	431,747 27	625,217 03	868,983 78	1,165,785 94	1,340,615 38
Depreciation Reserve	478,145 88	850,618 07	1,337,739 73	1,843,804 68	2,463,723 83
Surplus	326,830 66	750,549 35	880,730 55	1,101,448 70	1,481,414 68
Total Reserves	$ 1,439,475 07	$ 2,546,513 55	$ 3,481,920 28	$ 4,660,817 91	$ 5,980,551 79
Total Liabilities and Reserves	$11,907,826 86	$15,249,203 36	$17,683,264 07	$21,358,935 39	$24,427,276 65
Percentage of Net Debt to Total Assets	88.0%	83.0%	80.3%	78.4%	75.5%

COMPARATIVE CONDENSED BALANCE SHEETS OF ELECTRIC DEPARTMENTS OF HYDRO MUNICIPALITIES AS AT DECEMBER 31st, 1916 and 1917

STATE-

Comparative Condensed Balance Sheets of Electric Departments

Municipality	Toronto		Hamilton	
Population	463,705		100,461	
——	1916	1917	1916	1917
ASSETS	$ c.	$ c.	$ c.	$ c.
Lands and Buildings	703,215 79	807,332 75	72,609 20	72,455 26
Sub-Station Equipment	946,400 28	1,267,727 90	89,713 89	101,604 78
Distribution System, Overhead	1,703,286 32	2,469,769 69	300,134 25	387,077 02
" " Underground	852,317 09	913,145 61	157,415 41	157,888 19
Line Transformers	394,432 05	504,169 70	102,299 20	128,353 84
Meters	638,229 41	715,943 63	146,947 41	173,294 57
Street Light Equipment, Regular	700,908 22	702,939 78	92,882 82	94,146 71
" " Ornamental	.....	.....	.....	.....
Miscel. Equip. and Construction Exp.	1,528,054 43	1,535,111 36	120,189 97	136,749 89
Steam or Hydraulic Plant	e 34,343 18	e 34,343 18	.....	.....
Old Plant	.....	f 77,120 72	2,000 00	2,000 00
Total Plant	7,501,186 77	9,027,604 32	1,084,192 15	1,253,570 26
Bank and Cash Balance	710,141 95	2,222 18	.....	.....
Inventories	425,259 74	792,422 03	32,300 98	60,420 92
Accounts Receivable	241,461 01	467,035 97	104,485 43	121,098 92
Sinking Fund	590,195 03	630,553 40	72,887 60	96,894 78
Other Assets	4,122 20	28,246 07	6,071 12	8,358 87
Total Assets	9,472,366 70	10,948,083 97	1,299,937 28	1,540,343 75
LIABILITIES AND RESERVES				
Liabilities				
Debenture Balance	7,898,000 00	7,876,631 08	840,000 00	1,020,000 00
Accounts Payable	166,789 53	662,729 37	75,881 85	119,152 86
Bank Overdraft	.....	650,000 00	101,022 98	3,087 87
Other Liabilities	17,184 46	32,592 10	23,944 75	37,567 41
Total Liabilities	8,081,973 99	9,221,952 55	1,040,849 58	1,179,808 14
Reserves				
Debentures Paid	.....	21,368 92	.....	.....
Sinking Fund Reserve	590,195 03	630,553 40	72,887 60	96,894 78
Depreciation Reserve	736,807 23	998,389 80	92,777 42	145,065 16
Surplus	63,390 45	75,819 30	93,422 68	118,575 67
Total Liabilities and Reserves	9,472,366 70	10,948,083 97	1,299,937 28	1,540,343 75
Percentage of Net Debt to Total Assets	85.3	84.2	89.0	76.5

"e" Exhibition construction.
"f" Leasehold Improvements.

MENT "A"

of Hydro Municipalities as at December 31st, 1916 and 1917

Ottawa 100,163		London 58,055		Brantford 25,420		Windsor 24,162	
1916	1917	1916	1917	1916	1917	1916	1917
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
88,344 15	88,356 15	70,728 19	111,472 11	11,753 82	11,760 32	11,629 09	11,641 60
108,988 09	108,988 09	168,395 04	176,595 22	39,521 99	47,275 84	35,569 56	35,674 81
318,229 86	333,412 70	329,206 48	359,065 47	105,373 04	110,417 82	133,385 25	156,801 01
77,897 39	77,897 39	352 43	352 43	.....	.....	.....	.....
92,663 05	101,953 54	41,516 23	44,625 38	22,384 67	32,655 96	15,567 06	23,551 85
109,891 07	116,382 71	123,342 88	139,482 06	24,735 95	30,791 79	34,904 43	51,788 84
57,433 54	59,844 18	41,191 09	41,744 46	15,920 77	15,995 87	121,476 30	126,885 54
29,957 84	29,957 84	.....	.....	31,068 29	31,073 27	35,404 07	35,520 22
29,847 05	30,758 35	50,627 34	56,143 76	23,919 96	24,690 95	50,445 21	62,203 71
.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	7,826 13
913,252 04	947,550 95	825,359 68	929,480 89	274,678 49	304,661 82	438,380 97	511,893 71
51,110 55	51,720 08	4,072 54	3,943 24	2,051 95	148 02	3,689 43	115 21
22,431 62	33,586 89	37,841 57	110,574 77	1,386 39	1,826 31	14,747 32	49,476 95
17,658 60	24,205 00	78,958 90	109,790 13	3,553 21	5,866 23	3,164 66	2,993 85
114,201 16	134,904 18	42,681 40	53,746 38	17,859 68	25,795 06	5,666 09	8,457 27
1,186 12	.....	185,000 00	75,917 34	.....	.....	88 77	150 00
1,119,840 09	1,191,967 10	1,173,914 09	1,283,452 75	299,529 72	338,297 44	465,737 24	573,086 99
700,000 00	700,000 00	706,897 55	700,290 11	237,500 00	237,500 00	219,928 72	266,487 38
4,713 68	5,609 74	139,342 16	108,744 14	3,544 29	22,831 81	10,000 00	48,595 78
.....	.....	.....	50,598 12	.....	1,273 70	.....	.....
.....	.....	2,086 50	2,085 50	2,276 50	.....	213,884 09	d216,879 92
704,713 68	705,609 74	848,326 21	861,717 87	243,320 79	261,605 51	443,812 81	531,963 08
.....	.....	35,002 45	41,609 89	.....	.....	5,071 31	8,512 65
114,201 16	134,904 18	42,681 40	53,746 38	17,859 68	25,795 06	5,666 09	8,457 27
254,553 30	291,668 30	124,396 06	160,927 68	22,908 22	32,408 22	5,157 50	15,240 50
46,371 95	59,784 88	123,507 97	165,450 93	15,441 03	18,488 65	6,029 53	8,913 49
1,119,840 09	1,191,967 10	1,173,914 09	1,283,452 75	299,529 72	338,297 44	465,737 24	573,086 99
62.9	59.1	72.3	67.0	81.3	77.6	94.1	93.0

"d" Local Improvement Debentures *re* Ornamental Street Lighting.

STATEMENT

Comparative Condensed Balance Sheets of Electric Departments

Municipality	Peterborough		Kitchener	
Population	20,426		19,266	
——	1916	1917	1916	1917
ASSETS	$ c.	$ c.	$ c.	$ c.
Lands and Buildings	8,248 17	8,239 19	31,423 12	31,500 59
Sub-Station Equipment	12,824 50	7,931 35	70,216 45	90,345 62
Distribution System, Overhead	70,605 90	82,439 83	94,801 23	99,625 40
" " Underground	.....	.....	6,864 35	6,864 35
Line Transformers	28,622 94	30,597 12	34,074 57	41,638 16
Meters	32,876 43	39,824 70	45,067 49	50,442 79
Street Light Equipment, Regular	5,334 91	2,733 72	20,521 23	20,695 08
" " Ornamental	26,107 68	26,107 68	.....	.....
Miscel. Equip. and Construction Exp.	32,251 12	56,929 27	6,834 96	6,768 51
Steam or Hydraulic Plant	.....	.....	.....	.....
Old Plant	11,789 42	20,039 98	55,952 40	52,536 31
Total Plant	228,661 07	274,842 84	365,755 80	400,416 81
Bank and Cash Balance	850 26	.....	8,583 96	25 00
Inventories	2,898 98	3,026 53	5,960 22	6,571 57
Accounts Receivable	5,692 47	6,279 21	8,106 14	10,056 97
Sinking Fund	7,795 08	11,141 50	.....	.....
Other Assets	.....	.....	17,730 42	16,864 19
Total Assets	245,897 86	295,290 08	406,136 54	433,934 54
LIABILITIES AND RESERVES				
Liabilities				
Debenture Balance	120,000 00	220,000 00	236,220 14	228,437 78
Accounts Payable	78,619 25	5,888 75	11,343 22	10,847 93
Bank Overdraft	.....	18,803 16	.....	.....
Other Liabilities	8,487 96	1,687 94	.....	4,708 92
Total Liabilities	207,107 21	246,379 85	247,563 36	243,994 63
Reserves				
Debentures Paid	.....	.....	63,929 86	71,712 22
Sinking Fund Reserve	7,795 08	11,141 50	.....	.....
Depreciation Reserve	13,750 00	20,620 00	49,441 49	63,441 49
Surplus	17,245 57	17,148 73	45,201 83	54,786 20
Total Liabilities and Reserves	245,897 86	295,290 08	406,136 54	433,934 54
Percentage of Net Debt to Total Assets	84.2	83.3	60.9	56.3

"A"—Continued

of Hydro Municipalities as at December 31st, 1916 and 1917

St. Catharines 17,880		St. Thomas 17,174		Stratford 17,081		Guelph 16,735	
1916	1917	1916	1917	1916	1917	1916	1917
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
1,492 42	5,285 97	29,463 54	31,149 00	23,977 25	23,670 24	19,547 56	7,547 56
11,407 86	44,283 98	41,382 42	60,767 28	21,180 71	64,040 01	59,022 65	52,259 46
99,137 55	117,978 55	69,620 45	71,481 96	90,347 88	95,745 88	48,565 40	65,101 19
.....	.....	862 95	911 93	.....	.....	.....	.....
26,101 39	36,433 75	13,984 50	17,635 40	15,357 80	17,584 82	12,687 97	11,523 88
22,828 57	29,793 51	27,151 73	31,396 66	27,791 74	33,506 44	31,279 81	36,192 82
7,625 55	7,869 30	12,234 32	12,258 11	5,980 95	5,987 52	25,350 34	25,851 60
.....	.....	6,767 16	6,767 16	22,725 24	11,075 05	.....	.....
22,773 94	11,859 32	7,023 16	6,091 41	7,848 12	13,151 33	6,919 76	7,072 38
.....	.....	.....	.....	.....	.....	a36,132 81	a32,843 73
41,351 25	35,667 94	2,795 84	2,591 98	10,927 00	10,927 00	.....	.....
232,718 53	289,172 32	211,286 07	241,050 89	226,136 69	275,688 36	239,506 30	238,392 62
10,513 39	4,186 01	32,627 98	5,100 48	8,244 03	57 41	11,793 31	6,067 81
1,840 26	4,153 45	3,275 27	6,074 29	2,199 76	1,762 04	17,559 32	23,123 74
2,752 90	10,977 17	9,086 15	8,482 55	479 93	1,704 81	7,655 01	19,624 01
6,667 03	9,210 95	.....	.....	17,751 59	22,641 53	18,619 72	21,599 14
.....	.....	138 57	c 5,069 65	.....	.....	.....	c4,786 70
254,492 11	317,699 90	256,414 04	265,777 86	254,812 00	301,854 09	295,133 66	313,594 02
207,022 83	229,482 45	120,810 52	116,156 84	142,000 00	182,950 00	123,201 16	120,949 86
8,964 32	465 10	9,398 24	4,800 00	33,091 41	16,465 34	7,437 01	10,853 76
.....	.....	.....	.....	.....	3,813 80	.....	.....
.....	d 11,859 32	.....	.....	.....	.....	.....	.....
215,987 15	241,806 87	130,208 76	120,956 84	175,091 41	203,229 14	130,638 17	131,803 62
.....	2,540 38	27,273 91	31,927 59	28,470 00	32,850 00	21,798 83	24,050 13
6,667 03	9,210 95	.....	.....	17,751 59	22,641 53	18,619 72	21,599 14
18,600 00	28,400 00	66,462 04	77,918 00	29,874 92	37,121 83	69,279 03	80,720 92
13,237 93	35,741 70	32,469 33	34,975 43	3,624 08	6,011 59	54,797 91	55,420 21
254,492 11	317,699 90	256,414 04	265,777 86	254,812 00	301,854 09	295,133 66	313,594 02
84.8	76.0	50.7	45.5	69.1	67.8	44.2	42.1

"a" Motors rented to consumers.
"c" Dominion War Loan Investment.
"d" Local Improvement Debentures, *re* Ornamental Street Lighting.

STATEMENT

Comparative Condensed Balance Sheets of Electric Departments

Municipality	Port Arthur		Chatham	
Population	14,307		12,863	
——	1916	1917	1916	1917
ASSETS	$ c.	$ c.	$ c.	$ c.
Lands and Buildings			22,144 44	22,795 85
Sub-Station Equipment			13,856 63	13,883 63
Distribution System, Overhead			50,362 48	55,557 36
" " Underground				
Line Transformers	a	a	12,727 18	17,495 66
Meters			15,561 50	17,734 80
Street Light Equipment, Regular			7,517 98	7,517 98
" " Ornamental			26,907 19	26,907 19
Miscel. Equip. and Construction Exp.			14,154 87	13,541 32
Steam or Hydraulic Plant	675,641 74	688,917 94		
Old Plant				
Total Plant	675,641 74	688,917 94	163,232 27	175,433 79
Bank and Cash Balance	6,834 64	4,255 31	25 00	4,018 23
Inventories	12,194 06	19,793 98	21,712 28	27,942 85
Accounts Receivable	98,690 26	147,970 21	3,797 92	6,830 94
Sinking Fund	81,537 46	94,594 09		
Other Assets	9,765 00	14,260 11	b *119 81*	
Total Assets	884,663 16	969,791 64	188,887 28	214,225 81
LIABILITIES AND RESERVES				
Liabilities				
Debenture Balance	559,403 71	549,581 02	87,654 90	86,299 05
Accounts Payable	34,170 24	47,114 10	62,712 49	92,956 98
Bank Overdraft			7,137 59	
Other Liabilities	4,422 64		29,037 20	d 26,907 19
Total Liabilities	597,996 59	596,695 12	186,542 18	206,163 22
Reserves				
Debentures Paid	66,696 29	76,518 98	2,345 10	3,700 95
Sinking Fund Reserve	81,537 46	94,594 09		
Depreciation Reserve	12,283 82	14,260 11		4,361 64
Surplus	126,149 00	187,723 34		
Total Liabilities and Reserves	884,663 16	969,791 64	188,887 28	214,225 81
Percentage of Net Debt to Total Assets		61.6	98.8	96.4

"a" All plant included in total.
"b" Operating losses shown in italics.
"d" Local Improvement Debentures, *re* Ornamental Street Lighting.

"A"—Continued

of Hydro Municipalities as at December 31st, 1916 and 1917

Owen Sound		Galt		Sarnia		Niagara Falls	
11,910		11,852		11,676		11,147	
1916	1917	1916	1917	1916	1917	1916	1917
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
24,446 80	28,473 74	12,286 30	12,690 11	96 06	36,761 06	14,183 10	14,474 80
9,626 38	5,839 66	26,104 06	31,120 80	5,900 11	48,275 18	22,165 31	22,301 95
46,266 12	47,497 24	115,954 39	126,117 03	33,562 61	85,731 10	51,385 71	57,016 15
.....	.....	.....	.....	.....	.....	.....	.....
11,001 65	11,815 26	19,488 11	21,478 78	10,253 97	26,110 54	28,952 40	35,576 81
20,853 60	21,399 45	31,975 55	33,354 19	1,446 43	25,635 88	30,107 74	36,694 52
6,788 66	6,967 41	8,501 57	8,936 41	2,281 53	4,470 88	9,542 43	12,872 87
500 00	500 00	50,703 11	53,237 82	410 06	7,482 11	16,000 00	16,000 00
1,202 04	1,230 54	12,104 91	12,295 40	557 39	3,478 01	1,943 49	2,605 26
33,282 00	33,282 00	.....	.....	169,063 55	.....	.....	.....
.....	.....	.....	.....	.....	66,581 81	7,772 00	2,519 23
153,967 25	157,005 30	277,118 00	299,229 92	223,571 71	304,526 57	182,052 18	200,061 59
16,883 65	21,099 50	.....	.....	45,784 84	9,707 78	50 00	1,221 12
4,845 02	7,777 48	3,138 81	4,515 99	31 29	5,328 35	.....	3,973 40
2,062 43	2,437 15	.....	1,623 32	.....	.....	7,386 00	8,544 68
58,733 81	68,875 83	26,666 56	33,245 80	.....	.....	.....	.....
139 40	.....	.....	.....	.....	.....	973 41	.....
236,631 56	257,195 26	306,923 37	338,615 03	269,387 84	319,562 70	190,461 59	213,800 79
141,000 00	141,000 00	178,902 34	178,902 34	244,737 85	241,279 97	98,809 07	103,689 36
4,830 18	5,609 04	.....	.....	10,462 15	5,967 45	1,522 41	.....
.....	.....	40,001 97	48,041 24	.....	25,000 00	9,704 36	12,519 66
.....	.....	.....	.....	.....	d 9,871 67	923 17	1,090 08
145,830 18	146,609 04	218,904 31	226,943 58	255,200 00	282,119 09	110,959 01	117,299 10
.....	.....	.....	.....	3,262 15	6,720 03	43,948 93	50,553 64
58,733 81	68,875 83	26,666 56	33,245 80	.....	3,500 00	.....	.....
3,307 80	7,803 50	44,000 00	54,100 00	.....	7,613 00	7,945 00	15,165 00
28,759 77	33,906 89	17,352 50	24,325 65	10,925 69	19,610 58	27,608 65	30,783 05
236,631 56	257,195 26	306,923 37	338,615 03	269,387 84	319,562 76	190,461 59	213,800 79
61.6	57.0	71.3	67.0	94.6	88.5	58.2	55.1

"d" Local Improvement Debentures, *re* Ornamental Street Lighting.

STATEMENT

Comparative Condensed Balance Sheets of Electric Departments

Municipality	Woodstock		Brockville	
Population	10,084		9,428	
——	1916	1917	1916	1917
ASSETS	$ c.	$ c.	$ c.	$ c.
Lands and Buildings	7,331 95	7,331 95	27,079 01	27,715 67
Sub-Station Equipment	27,685 13	27,685 13	.....	.....
Distribution System, Overhead	38,264 67	41,124 41	37,671 14	40,620 40
" " Underground	.....	.....	.....	.....
Line Transformers	20,635 31	22,640 12	10,258 61	13,091 29
Meters	18,492 45	20,357 63	12,778 36	14,485 97
Street Light Equipment, Regular	10,450 67	10,450 67	11,448 52	11,985 05
" " Ornamental	.....	.....	.....	.....
Miscel. Equip. and Construction Exp.	.....	.....	3,763 23	3,794 89
Steam or Hydraulic Plant	15,835 26	16,193 85	51,948 00	52,200 08
Old Plant	15,743 62	15,008 62	.....	.....
Total Plant	154,439 06	160,792 38	154,946 87	163,893 35
Bank and Cash Balance	1,796 60	3,271 69	200 00	200 00
Inventories	525 33	1,649 47	3,484 08	4,112 98
Accounts Receivable	.....	.....	34,707 55	35,533 36
Sinking Fund	40,296 29	44,388 43	20,778 13	25,737 53
Other Assets	23,000 00 c	26,000 00	1,367 94	1,689 20
Total Assets	220,057 28	236,101 97	215,484 57	231,166 42
LIABILITIES AND RESERVES				
Liabilities				
Debenture Balance	107,385 63	107,385 63	153,375 35	149,233 88
Accounts Payable	.....	.....	1,672 48	1,550 12
Bank Overdraft	.....	.....	11,024 49	28,005 28
Other Liabilities	.....	.....	.....	.....
Total Liabilities	107,385 63	107,385 63	166,072 32	178,789 28
Reserves				
Debentures Paid	.....	.....	3,977 99	8,119 46
Sinking Fund Reserve	40,296 29	44,388 43	20,778 13	25,737 53
Depreciation Reserve	29,414 18	35,945 78	7,000 00	13,000 00
Surplus	42,961 18	48,382 13	17,656 13	5,520 15
Total Liabilities and Reserves	220,057 28	236,101 97	215,484 57	231,166 42
Percentage of Net Debt to Total Assets	48.8	45.4	77.2	77.4

"c" Dominion War Loan Investment.

"A"—Continued

of Hydro Municipalities as at December 31st, 1916 and 1917

Welland 7,243		Barrie 6,453		Collingwood 6,361		Midland 6,258	
1916	1917	1916	1917	1916	1917	1916	1917
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
6,550 39	27,521 25	12,034 61	12,266 06	4,343 60	4,343 60	4,780 69	8,501 71
16,185 58	38,020 61	4,553 77	4,682 98	4,368 39	7,920 80	8,407 78	8,407 78
47,636 88	54,786 47	21,641 41	23,706 39	26,364 70	28,131 15	34,013 89	38,315 57
.....	.....	.....	.....	.....	.....	.....	.....
12,605 44	14,302 63	4,646 63	5,006 25	6,740 60	8,199 96	10,759 05	10,969 39
8,755 87	8,911 75	15,487 93	16,179 80	11,098 00	12,592 21	12,188 33	13,391 70
2,305 19	2,494 34	3,357 02	3,357 02	2,446 35	2,400 25	3,860 32	3,929 75
.....	.....	.....	.....	.....	.....	.....	.....
7,348 74	8,331 95	757 49	757 49	5,208 02	5,509 73	3,500 58	3,500 58
.....	.....	46,491 57	44,886 07	.....	.....	.....	.....
.....	.....	.....	.....	3,519 17	359 17	7,057 84	7,007 84
101,388 09	154,369 00	108,970 43	110,842 06	64,088 83	69,456 87	84,568 48	94,024 32
3,630 67	6,061 47	9,125 32	8,696 82	9,575 32	11,244 46	12,833 55	6,544 96
2,753 28	6,004 19	5,850 42	4,685 15	45 30	271 54	902 25	2,289 85
33,899 06	26,389 75	4,835 56	6,991 71	7,369 37	7,857 10	.....	1,488 77
5,170 70	8,119 67	.....	.....	.....	.....	.....	.....
.....	.....	.....	c 6,400 00	.....	.....	.....	.....
146,841 80	200,944 08	128,781 73	137,615 74	81,078 82	88,829 97	98,304 28	104,347 90
90,000 00	130,000 00	44,547 24	40,494 75	31,171 45	27,786 70	36,304 07	33,851 59
32,852 15	37,601 78	1,659 72	1,540 96	3,404 50	10,184 50	1,300 00	1,950 00
.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....
122,852 15	167,601 78	46,206 96	42,035 71	34,575 95	37,971 20	37,604 07	35,801 59
.....	.....	42,452 76	46,505 25	8,238 84	11,623 59	17,445 93	19,898 41
5,170 70	8,119 67	.....	.....	.....	.....	.....	.....
8,425 00	14,085 00	12,925 00	15,853 00	9,540 00	12,090 00	15,500 00	19,150 00
10,393 95	11,137 63	27,197 01	33,221 78	28,724 03	27,145 18	27,754 28	29,497 90
146,841 80	200,944 08	128,781 73	137,615 74	81,078 82	88,829 97	98,304 28	104,347 90
83.7	80.0	35.9	32.6	42.6	42.8	38.2	34.3

"c" Dominion War Loan Investment.

STATEMENT

Comparative Condensed Balance Sheets of Electric Departments

Municipality	Ingersoll		Walkerville	
Population	5,176		5,096	
——	1916	1917	1916	1917
ASSETS	$ c.	$ c.	$ c.	$ c.
Lands and Buildings	3,057 57	3,057 57	16,917 78	16,921 45
Sub-Station Equipment	10,302 31	10,302 31	19,133 82	19,524 12
Distribution System, Overhead	31,785 67	32,846 23	18,979 67	22,841 30
" " Underground	.....	.....	.....	.....
Line Transformers	8,025 25	9,229 34	14,182 87	16,697 88
Meters	11,538 95	12,025 63	14,891 76	20,119 36
Street Light Equipment, Regular	2,336 01	2,336 01	45,876 33	45,883 83
" " Ornamental	4,597 59	4,597 59	.....	.....
Miscel. Equip. and Construction Exp.	8,631 30	8,431 30	16,272 91	18,962 85
Steam or Hydraulic Plant	.....	.....	18,556 21	g 26,842 66
Old Plant	22,334 21	21,834 93	18,509 77	19,169 29
Total Plant	102,608 86	104,660 91	183,321 12	206,962 74
Bank and Cash Balance	4,008 65	5,747 19	50 00	50 00
Inventories	1,093 84	1,401 74	10,418 98	13,040 07
Accounts Receivable	6,326 75	7,429 91	12,362 71	19,282 76
Sinking Fund	10,304 50	12,507 98	.....	.....
Other Assets	.....	c2,400 00	.....	.....
Total Assets	124,342 60	134,147 73	206,152 81	239,335 57
LIABILITIES AND RESERVES				
Liabilities				
Debenture Balance	79,800 00	79,800 00	90,907 37	88,550 60
Accounts Payable	1,837 50	1,829 26	50,130 16	51,389 00
Bank Overdraft	.....	.....	4,639 37	21,000 39
Other Liabilities	4,597 59	d4,597 59	d 45,876 33	d45,876 33
Total Liabilities	86,235 09	86,226 85	191,553 23	206,816 32
Reserves				
Debentures Paid	.....	.....	5,351 63	7,708 40
Sinking Fund Reserve	10,304 50	12,507 98	.....	.....
Depreciation Reserve	11,880 00	14,910 00	3,773 06	10,642 12
Surplus	15,923 01	20,502 90	5,474 89	14,168 73
Total Liabilities and Reserves	124,342 60	134,147 73	206,152 81	239,335 57
Percentage of Net Debt to Total Assets	69.4	64.4	92.9	86.4

"c" Dominion War Loan Investment.
"d" Local Improvement Debentures, *re* Ornamental Street Lighting.
"g" Ford City and Sandwich East Construction.

"A"—Continued

of Hydro Municipalities as at December 31st, 1916 and 1917

Waterloo 4,956		Goderich 4,655		Dundas 4,652		Preston 4,643	
1916	1917	1916	1917	1916	1917	1916	1917
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
5,142 20	5,142 20	12,915 81	12,915 81	8,227 20	8,373 32	.....	.....
19,502 40	19,502 40	9,943 24	9,943 24	4,741 17	4,846 17	13,676 42	13,676 42
36,959 55	37,632 34	28,440 55	29,806 75	39,519 25	39,935 78	39,573 54	40,605 76
.....	.....	.....	.....	.....	.....	.....	.....
9,240 38	9,871 74	6,581 72	8,583 22	9,556 93	9,558 43	13,501 69	15,085 28
10,823 75	11,441 85	10,327 51	10,830 89	8,522 81	9,712 08	12,301 42	13,237 28
5,229 63	5,238 77	4,915 52	4,915 52	1,740 34	1,740 34	2,743 78	2,847 98
.....	.....	.....	.....	.....	.....	.....	.....
2,933 16	2,609 66	3,990 81	3,990 81	5,840 41	5,951 01	6,294 12	6,554 04
2,483 64	2,483 64	.....	.....	.....	.....	.....	.....
9,666 15	9,666 15	8,231 05	6,483 55	1,960 38	1,942 38	23,549 22	23,549 22
101,980 86	103,588 75	85,346 21	87,469 79	80,108 49	82,059 51	111,640 19	115,555 98
.....	1,124 72	8,053 02	3,891 70	.....	.....	.....	36 70
2,583 41	3,358 15	375 81	653 32	1,250 09	1,568 50	1,472 60	2,389 61
3,401 83	7,593 34	2,929 34	8,210 27	2,834 68	3,565 58	4,603 14	8,791 93
2,016 00	2,304 00	2,883 30	2,999 20	.....	.....	.....	.....
2,137 05	.....	.....	.....	.....	.....	183 80	.....
112,119 15	117,968 96	99,587 68	103,224 28	84,193 26	87,193 59	117,899 73	126,774 22
61,838 48	60,709 12	51,233 87	49,463 55	50,039 67	49,127 83	64,769 69	72,402 43
1,656 29	1,710 82	8,130 24	7,667 97	.....	.....	1,575 44	3,340 71
2,144 89	.....	.....	.....	13,764 99	9,433 97	13,813 32	3,010 69
.....	.....	.....	.....	.....	.....	.....	.....
65,639 66	62,419 94	59,364 11	57,131 52	63,804 66	58,561 80	80,158 45	78,753 83
4,161 52	5,290 88	4,854 18	6,624 50	2,960 33	3,872 17	13,095 82	16,463 08
2,016,00	2,304 00	2,883 30	2,999 20	.....	.....	.....	.....
19,150,00	23,325 00	9,270 00	12,720 00	9,149 00	11,939 00	17,048 34	20,978 34
21,151,97	24,629 14	23,216 09	23,749 06	8,279 27	12,820 62	7,597 12	10,578 97
112,119 15	117,968 96	99,587 68	103,224 28	84,193 26	87,193 59	117,899 73	126,774 22
58.5	53.0	59.6	55.5	75.8	67.0	68.0	62.0

STATEMENT

Comparative Condensed Balance Sheets of Electric Departments

Municipality	Paris		Wallaceburg	
Population	4,370		4,107	
——	1916	1917	1916	1917
ASSETS	$ c.	$ c.	$ c.	$ c.
Lands and Buildings	7,626 26	7,626 26	3,876 29	3,876 29
Sub-Station Equipment	10,944 83	10,948 32	760 50	764 10
Distribution System, Overhead	31,517 91	32,636 21	18,935 55	23,412 23
" " Underground	.....	.....	.....	.....
Line Transformers	5,258 11	6,730 48	3,687 92	11,485 59
Meters	7,289 38	8,346 00	6,574 53	7,444 60
Street Light Equipment, Regular	2,114 05	2,502 85	1,568 81	1,568 81
" " Ornamental	.....	.....	.....	.....
Miscel. Equip. and Construction Exp.	210 04	210 04	3,229 32	3,264 59
Steam or Hydraulic Plant	.....	.....	.....	.....
Old Plant	19,271 46	17,962 86	23,884 42	22,197 10
Total Plant	84,232 04	86,963 02	62 517 34	74,013 31
Bank and Cash Balance	.....	301 45	.....	.....
Inventories	22,13	8 17	3,515 34	5,482 17
Accounts Receivable	75,12	1,400 00	2,874 81	5,302 42
Sinking Fund	6,857 22	9,511 22	.....	.....
Other Assets	.....	.....	.....	.....
Total Assets	91,186 51	98,183 86	68,907 49	84,797 90
LIABILITIES AND RESERVES				
Liabilities				
Debenture Balance	55,049 42	53,225 69	43,744 15	43,063 09
Accounts Payable	.....	.....	21,362 02	32,267 45
Bank Overdraft	2,219 66	.....	1,223 19	1,668 17
Other Liabilities	.....	.....	100 00	.....
Total Liabilities	57,269 08	53,225 69	66,429 36	76,998 71
Reserves				
Debentures Paid	21,950 58	23,774 31	1,255 85	1,936 91
Sinking Fund Reserve	6,857 22	9,511 22	.....	.....
Depreciation Reserve	2,000 00	4,500 00	1,038 00	2,790 00
Surplus	3,109 63	7,172 64	184 28	3,072 28
Total Liabilities and Reserves	91,186 51	98,183 86	68,907 49	84,797 90
Percentage of Net Debt to Total Assets	62.8	54.3	96.4	90.8

"A"—Continued

of Hydro Municipalities as at December 31st, 1916 and 1917

Simcoe 4,061		Brampton 4,041		St. Mary's 3,960		Penetanguishene 3,928	
1916	1917	1916	1917	1916	1917	1916	1917
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
1,496 75	1,496 75	3,808 08	3,808 08	13,674 27	13,674 27	2,151 00	2,151 00
5,851 99	5,851 99	8,995 62	8,961 23	11,837 64	11,837 64	3,507 71	3,507 71
17,330 44	18,127 74	31,947 38	32,558 78	23,365 50	24,742 88	24,811 72	25,513 68
.....	.....	.....	.....	.....	.....	.....	.....
2,270 87	2,576 67	10,039 24	10,746 44	11,907 19	12,601 50	4,535 87	5,487 71
1,534 55	2,110 41	9,651 13	10,216 53	13,311 59	14,018 55	5,408 94	5,604 03
1,478 85	1,478 85	1,805 73	1,805 73	5,888 52	5,914 88	1,721 95	1,989 77
1,181 83	1,181 83	.....	.....	.....	.....	.....	.....
3,662 16	3,662 16	2,904 61	2,904 61	2,084 77	2,451 52	278 93	647 47
.....	.....	.....	.....	.....	.....	.....	.....
927 92	927 92	15,000 00	15,000 00	.....	.....	2,874 00	2,874 00
35,735 36	37,414 32	84,151 79	86,001 40	82,069 48	85,241 24	45,290 12	47,775 37
5,222 56	5,158 10	1,800 14	.....	4,033 61	.....	.....	.....
86 00	.....	360 33	740 18	1,598 94	2,936 16	533 09	805 11
789 90	1,079 96	3,552 08	208 15	1,685 00	2,640 67	2,932 05	4,877 94
.....	.....	.....	.....	2,140 51	2,686 11	.....	.....
.....	.....	.....	n 8,231 44	.....	.....	.....	.....
41,833 82	43,652 38	89,864 34	95,181 17	91,527 54	93,504 18	48,755 26	53,458 42
35,434 90	35,434 90	61,180 02	59,197 20	40,275 79	37,818 60	27,505 90	26,782 51
866 14	457 33	.....	.....	7,526 39	5,768 04	.....	.....
.....	.....	.....	768 66	.....	.....	215 16	3,422 63
3,500 00	d 3,500 00	.....	.....	.....	.....	300 00	.....
39,801 04	39,392 23	61,180 02	59,965 86	47,802 18	43,586 64	28,021 06	30,205 14
.....	.....	7,870 62	9,853 44	22,971 23	25,428 42	3,494 10	4,217 49
.....	.....	.....	.....	2,140 51	2,686 11	.....	.....
1,350 00	2,566 00	14,200 00	17,300 00	9,840 00	13,180 00	9,225 00	11,225 00
682 78	1,694 15	6,613 70	8,061 87	8,773 62	8,623 01	8,015 10	7,810 79
41,833 82	43,652 38	89,864 34	95,181 17	91,527 54	93,504 18	48,755 26	53,458 42
95.1	90.6	68.1	62.8	52.2	46.5	57.5	56.7

"d" Local Improvement Debentures, *re* Ornamental Street Lighting.
"n" Municipal Debentures purchased for Investment.

STATEMENT

Comparative Condensed Balance Sheets of Electric Departments

Municipality	Petrolia		Tillsonburg	
Population	3,891		3,084	
——	1916	1917	1916	1917
ASSETS	$ c.	$ c.	$ c.	$ c.
Lands and Buildings	.....	.....	1,974 27	1,974 27
Sub-Station Equipment	2,360 59	2,360 59	6,818 47	7,459 16
Distribution System, Overhead	14,897 59	21,901 14	19,135 69	21,923 73
" " Underground	.....	.....	.....	.....
Line Transformers	3,824 69	7,210 94	3,408 92	5,480 75
Meters	4,143 66	5,060 38	5,016 13	5,538 30
Street Light Equipment, Regular	818 01	818 01	1,762 50	1,956 50
" " Ornamental	3,864 07	3,864 07	.....	.....
Miscel. Equip. and Construction Exp.	3,903 29	4,559 62	918 83	718 05
Steam or Hydraulic Plant	.....	.....	.....	.....
Old Plant	8,740 44	3,389 94	.....	.....
Total Plant	42,552 34	49,164 69	39,034 81	45,050 76
Bank and Cash Balance	.....	.....	5,587 50	291 96
Inventories	1,746 96	2,892 27	3,104 63	3,026 65
Accounts Receivable	.....	1,615 32	1,584 87	2,923 33
Sinking Fund	.....	.....	1,337 49	1,814 70
Other Assets	.....	.....	.....	c 6,000 00
Total Assets	44,299 30	53,673 28	50,649 30	59,107 40
LIABILITIES AND RESERVES				
Liabilities				
Debenture Balance	34,516 80	48,599 26	32,895 86	32,130 27
Accounts Payable	7,573 21	1,864 50	727 12	4,396 58
Bank Overdraft	1,655 26	452 77	.....	.....
Other Liabilities	.....	.....	.....	.....
Total Liabilities	43,745 27	50,916 53	33,622 98	36,526 85
Reserves				
Debentures Paid	483 20	1,400 74	3,104 14	3,869 73
Sinking Fund Reserve	.....	.....	1,337 49	1,814 70
Depreciation Reserve	.....	1,120 00	7,911 50	9,851 50
Surplus	70 83	236 01	4,673 19	7,044 62
Total Liabilities and Reserves	44,299 30	53,673 28	50,649 30	59,107 40
Percentage of Net Debt to Total Assets	98.8	95.0	66.4	62.0

"c" Dominion War Loan Investment.

"A"—Continued

of Hydro Municipalities as at December 31st, 1916 and 1917

Strathroy 2,998		Hespeler 2,740		Prescott 2,740		Orangeville 2,493	
1916	1917	1916	1917	1916	1917	1916	1917
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
1,070 00	1,070 00	3,499 23	3,499 23	2,761 54	2,761 54	100 00	2,400 00
4,691 16	4,691 16	8,502 78	8,502 78	.....	.....	.....	1,169 00
16,649 55	18,794 54	7,171 70	7,662 72	24,405 64	24,878 80	13,330 35	19,749 43
.....	.....	.....	.....	.....	.....	.....	.....
3,460 85	3,435 10	4,886 87	5,144 73	5,468 06	5,834 14	707 67	1,714 28
4,731 00	5,475 12	4,583 14	4,959 26	7,523 11	7,764 58	919 46	2,611 58
1,499 14	1,499 14	1,009 68	1,019 93	1,316 52	1,346 33	784 65	1,139 49
.....	.....	.....	.....	.....	.....	.....	.....
578 15	578 15	93 08	93 08	1,127 53	1,227 09	431 39	3,306 83
.....	.....	.....	.....	12,108 35	12,108 35	.....	.....
12,343 15	12,343 15	3,000 00	3,000 00	.....	.....	11,849 50	4,149 35
45,023 00	47,886 36	32,746 48	33,881 73	54,710 75	55,920 83	28,123 02	36,239 96
3,602 89	7,538 52	3,835 89	1,850 65	296 25	77 83	.....	492 37
4,523 64	2,790 20	.....	.....	.....	1,170 00	974 16	1,435 51
.....	.....	246 68	3,884 37	588 72	899 74	730 53	826 79
.....	.....	.....	.....	617 92	982 81	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....
53,149 53	58,215 08	36,829 05	39,616 75	56,213 64	59,051 21	29,827 71	38,994 63
44,698 73	43,537 10	24,909 72	23,015 60	21,862 15	21,148 52	28,286 12	30,954 08
536 95	3,672 68	838 19	.....	.....	.....	1,296 91	4,505 31
.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....
45,235 68	47,209 78	25,747 91	23,015 60	21,862 15	21,148 52	29,583 03	35,459 39
1,533 27	2,694 90	7,660 79	9,554 91	2,117 19	2,830 82	.....	2,045 92
.....	.....	.....	.....	617 92	982 81	.....	.....
2,550 00	3,820 00	3,403 56	4,623 56	5,830 00	8,020 00	.....	1,000 00
3,830 58	4,490 40	16 79	2,422 68	25,786 38	26,069 06	244 68	489 32
53,149 53	58,215 08	36,829 05	39,616 75	56,213 64	59,051 21	29,827 71	38,994 63
84.7	81.1	69.9	58.2	38.9	36.0	99.2	91.2

STATEMENT

Comparative Condensed Balance Sheets of Electric Departments

Municipality Population	Listowel 2,326		Huntsville	Ridgetown 2,329	
——	1916	1917	1917	1916	1917
ASSETS	$ c.	$ c.	$ c.	$ c.	$ c.
Lands and Buildings	.....	.....	326 49	.....	.....
Sub-Station Equipment	.....	.....	647 30	889 26	889 26
Dist. System, Overhead	3,582 31	4,683 86	7,021 76	8,780 65	8,899 86
" " Underground	.....	.....	.....	.....	.....
Line Transformers	2,123 63	3,505 35	895 69	1,789 62	2,491 46
Meters	2,698 72	3,653 76	4,388 58	1,949 33	2,358 94
Street Light Equipment, Regular	1,686 20	5,467 63	605 92	823 17	823 17
" " Ornamental	.....	.....	.....	1,030 89	1,030 89
Miscel. Equip. and Construction Exp.	897 33	1,018 98	219 92	373 35	363 25
Steam or Hydraulic Plant	20,261 59	19,563 27	.....	.....	.....
Old Plant	.....	.....	7,790 33	8,066 14	7,830 24
Total Plant	31,249 78	37,892 85	21,895 99	23,702 41	24,687 07
Bank and Cash Balance	1,695 16	3,634 93	1,909 13	3,064 20	1,908 62
Inventories	2,501 94	2,207 97	1,357 62	989 55	554 86
Accounts Receivable	1,108 05	2,824 58	140 33	341 00	2,642 33
Sinking Fund	.....	.....	.....	.....	.....
Other Assets	4,925 89	.....	.....	.....	c 200 00
Total Assets	41,480 82	46,560 33	25,303 07	28,097 16	29,992 88
LIABILITIES AND RESERVES					
Liabilities					
Debenture Balance	34,178 52	32,697 42	17,214 79	18,759 89	18,027 43
Accounts Payable	442 68	2,889 04	5,594 60	.....	.....
Bank Overdraft	.....	.....	.....	1,225 12	.....
Other Liabilities	1,348 66	d 3,808 37	.....	1,319 10	d 1,319 10
Total Liabilities	35,969 86	39,394 83	22,809 39	21,304 11	19,346 53
Reserves					
Debentures Paid	1,411 37	2,892 47	918 75	696 10	1,428 56
Sinking Fund Reserve	.....	.....	.....	.....	.....
Depreciation Reserve	.....	960 00	775 00	425 00	985 00
Surplus	4,099 59	3,313 03	799 93	5,671 95	8,232 79
Total Liabilities and Reserves	41,480 82	46,560 33	25,303 07	28,097 16	29,992 88
Percentage of Net Debt to Total Assets	86.7	84.5	90.2	75.8	64.8

"c" Dominion War Loan Investment.
"d" Advance by Municipality *re* Ornamental Street Lights.

"A"—Continued

of Hydro Municipalities as at December 31st, 1916 and 1917

Elmira 2,270		Clinton 2,177		Weston 2,156		Milton 2,072	
1916	1917	1916	1917	1916	1917	1916	1917
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
.....	.....	.....	.....	3,230 94	3,230 94	.....	.....
.....	.....	7,738 47	7,738 47	5,450 72	7,068 41	5,550 19	5,550 19
9,747 18	10,533 25	10,719 10	11,373 27	13,525 06	13,978 00	10,354 52	10,802 09
.....	.....	.....	.....	.....	.....	.....	.....
2,396 92	3,605 74	2,496 79	2,723 51	5,680 72	9,553 16	1,966 05	2,776 90
2,686 73	3,234 72	2,865 04	3,273 06	4,260 69	4,880 38	3,282 59	3,628 02
607 84	607 84	206 41	206 41	1,936 66	1,936 66	935 43	959 87
.....	.....	.....	.....	.....	.....	.....	.....
2,076 74	2,076 74	3,310 45	3,310 45	2,833 77	3,178 93	2,486 23	2,486 23
.....	.....	.....	.....	.....	.....	.....	.....
2,295 52	2,295 52	12,085 32	11,502 55	.....	.....	4,065 85	4,065 85
19,810 93	22,353 81	39,421 58	40,127 72	36,918 56	43,826 48	28,640 86	30,269 15
6,196 10	5,277 18	1,329 56	395 65	878 60	4,959 43	3,553 37	5,689 61
123 28	155 75	1,697 68	2,919 02	72 89	356 24	2,468 43	2,964 91
61 32	27 30	71 67	139 17	4,689 88	425 36	3,924 16	1,314 11
.....	.....	2,557 29	3,529 78	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....
26,191 63	27,814 04	45,077 78	47,111 34	42,559 93	49,567 51	38,586 82	40,237 78
19,241 06	18,893 31	40,500 00	40,500 00	16,492 60	15,717 74	19,982 95	18,632 70
.....	.....	.....	.....	3,181 50	8,157 70	.....	334 85
.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	300 00	500 00
19,241 06	18,893 31	40,500 00	40,500 00	19,674 10	23,875 44	20,282 95	19,467 55
758 94	1,106 69	.....	.....	3,475,28	4,250 14	4,730 03	6,080 28
.....	.....	2,557 29	3,529 78	.....	.....	.....	.....
2,020 00	2,890 00	1,200 00	2,120 00	7,220 00	9,150 00	4,140 00	5,177 00
4,171 63	4,924 04	820 49	961 56	12,190 55	12,291 93	9,433 84	9,512 95
26,191 63	27,814 04	45,077 78	47,111 34	42,559 93	49,567 51	38,586 82	40,237 78
73.4	68.0	89.9	86.2	46.2	48.4	52.5	48.6

STATEMENT

Comparative Condensed Balance Sheets of Electric Departments

Municipality	Mimico		Chesley		Seaforth	
Population	1,976		1,975		1,964	
——	1916	1917	1916	1917	1916	1917
ASSETS	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Lands and Buildings	98 30	98 30	.....	.....	1,204 53	1,204 53
Sub-Station Equipment	.....	.....	585 17	587 42	6,031 75	6,031 75
Dist. System, Overhead	18,953 45	24,017 79	13,872 32	14,990 79	14,987 19	15,838 96
" Underground	.....	.....	.....	.....	.....	.....
Line Transformers	2,210 37	4,442 64	1,312 85	1,770 07	4,086 58	6,775 15
Meters	5,935 62	7,228 88	1,864 28	2,262 04	3,992 92	4,365 23
Street Light Equip. Regular	1,022 20	1,070 70	816 26	817 76	805 25	812 66
" Ornamental	.....	.....	.....	.....	.....	.....
Miscel. Equip. and Con. Exp.	1,308 49	1,308 49	2,612 12	2,792 44	355 98	355 98
Steam or Hydraulic Plant	.....	.....	.....	.....	.....	.....
Old Plant	.....	.....	5,509 60	5,503 60	.....	.....
Total Plant	29,528 43	38,166 80	26,572 69	28,724 12	31,464 20	35,384 26
Bank and Cash Balance	1,207 29	280 97	.....	977 22	1,396 83	1,628 47
Inventories	20 00	269 60	350 00	351 50	2,744 57	2,669 76
Accounts Receivable	656 29	55 62	780 57	198 73	132 95	123 14
Sinking Fund	.....	.....	.....	.....	2,414 32	2,956 64
Other Assets	.....	.....	.....	.....	.....	.....
Total Assets	31,412 01	38,772 99	27,703 17	30,251 57	38,152 87	42,762 27
LIABILITIES AND RESERVES						
Liabilities						
Debenture Balance	18,368 36	17,802 13	21,854 71	21,173 94	25,000 00	25,000 00
Accounts Payable	3,608 40	8,900 92	4,429 51	5,929 36	.....	.....
Bank Overdraft	.....	.....	179 96	.....	.....	.....
Other Liabilities	.....	.....	.....	.....	.....	.....
Total Liabilities	21,976 76	26,703 05	26 464 18	27,103 30	25,000 00	25,000 00
Reserves						
Debentures Paid	1,631 64	2,197 87	645 29	1,326 06	.....	.....
Sinking Fund Reserve	.....	.....	.....	.....	2,414 32	2,956 64
Depreciation Reserve	3,860,00	5,260 00	.....	715 00	5,375 00	6,800 00
Surplus	3,943,61	4,612 07	593 70	1,107 21	5,363 55	8,005 63
Total Liabilities and Reserves	31,412 01	38,772 99	27,703 17	30,251 57	38,152 87	42,762 27
Percentage of Net Debt to Total Assets	70.0	69.0	95.5	94.9	65.5	58.7

"A"—Continued

of Hydro Municipalities as at December 31st, 1916 and 1917

Mount Forest 1,941		Georgetown 1,905		Palmerston 1,843		Fergus 1,776	
1916	1917	1916	1917	1916	1917	1916	1917
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
3,725 00	3,725 00	12 00	12 00	.....	.....	.....	.....
686 75	686 75	.....	.....	691 88	691 88	.....	.....
13,817 62	14,164 96	15,996 12	16,873 07	5,611 28	11,121 13	8,988 86	10,471 19
.....	.....	.....	.....	.....	.....	.....	.....
1,926 64	1,936 27	6,471 35	6,471 35	1,620 66	1,831 66	2,434 47	2,713 77
2,307 58	2,615 90	4,104 95	4,553 47	1,435 43	2,346 22	2,515 02	2,875 84
1,655 77	1,655 77	956 14	985 39	489 49	738 00	826 27	838 27
.....	.....	.....	.....	.....	.....	.....	.....
876 07	876 07	1,193 20	1,397 65	672 47	1,638 06	562 37	562 37
.....	.....	.....	.....	12,429 55	.....	.....	.....
4,059 92	4,021 22	2,209 80	2,209 80	.....	4,644 31	2,440 33	2,546 59
29,055 35	29,681 94	30,943 56	32,502 73	22,950 76	23,011 26	17,767 32	20,008 03
1,335 00	3,009 45	1,049 53	3,417 71	.....	.....	.....	377 96
509 42	578 16	824 87	1,231 95	1,985 05	3,208 37	2,546 59	1,715 67
669 83	663 89	432 92	534 71	5,741 25	7,049 29	313 03	197 67
.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	c 200 00	.....	b *2,234 21*	.....	.....
31,569 60	33,933 44	33,250 88	37,887 10	30,677 06	35,503 13	20,626 99	22,299 33
17,576 36	17,043 67	19,194 59	17,893 29	14,736 87	13,756 32	15,546 07	15,300 22
7,307 02	7,130 57	.....	428 40	5,225 48	12,345 98	357 50	379 35
.....	.....	.....	.....	207 71	120 43	8 31	.....
.....	.....	.....	.....	.....	156 72	.....	.....
24,883 38	24,174 24	19,194 59	19,321 69	20,170 06	26,379 45	15,911 88	15,679 57
4,423 64	4,956 33	805 41	1,106 71	7,263 13	8,243 68	453 93	699 78
.....	.....	.....	.....	.....	.....	.....	.....
615 00	1,510 00	3,640.00	5,220 00	295 00	880 00	1,150 00	1,800 00
1,647 58	3,292 87	9,610.88	12,238 70	2,948 87	.....	3,111 18	4,119 98
31,569 60	33,933 44	33,250 88	37,887 10	30,677 06	35,503 13	20,626 99	22,299 33
78.5	71.0	57.7	51.2	65.8	71.5	77.1	70.4

"b" Operating losses shown in italics.
"c" Dominion War Loan Investment.

STATEMENT

Comparative Condensed Balance Sheets of Electric Departments

Municipality	Tilbury		Acton		Gravenhurst	
Population	1,740		1,735		1,702	
——	1916	1917	1916	1917	1916	1917
ASSETS	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Lands and Buildings	957 46	957 46	1,500 00	1,500 00	12,258 29	12,258 29
Sub-Station Equipment	.....	.....	597 62	597 62	11,074 20	11,309 97
Dist. System, Overhead	5,303 84	5,345 88	5,142 52	5,682 99	25,870 73	26,100 87
" Underground	.....	.....	.....	.....	.....	.....
Line Transformers	1,177 10	1,177 10	2,164 50	2,430 54	578 25	766 90
Meters	1,735 21	1,888 27	2,391 48	2,643 04	3,632 16	3,848 00
Street Light Equip.Regular	194 49	194 49	896 21	896 21	.....	692 40
" Ornamental	.....	.....	.....	.....	.....	.....
Miscel. Equip.and Con.Exp.	1,159 48	1,159 48	777 99	777 99	1,542 00	1,542 00
Steam or Hydraulic Plant	.....	.....	.....	.....	.....	.....
Old Plant	3,644 20	3,553 47	3,510 85	3,410 85	.....	.....
Total Plant	14,171 78	14,276 15	16,981 17	18,039 24	54,955 63	56,518 43
Bank and Cash Balance	509 19	822 21	2,726 25	2,544 60	590 79	870 52
Inventories	40 91	25 12	654 33	655 50	1,173 19	1,390 52
Accounts Receivable	4 17	.....	.....	.....	2,374 24	2,617 44
Sinking Fund	.....	.....	4,358 00	4,560 00	2,569 73	3,122 74
Other Assets	.....	c 50 00	.....	.....	81,952 92	78,103 82
Total Assets	14,726 05	15,173 48	24,719 75	25,799 34	143,616 50	142,623 47
LIABILITIES AND RESERVES						
Liabilities						
Debenture Balance	13,739 44	13,488 58	13,689 62	13,392 04	95,853 05	93,247 16
Accounts Payable	.....	.....	322 00	322 00	379 73	597 76
Bank Overdraft	.....	.....	.....	.....	.....	.....
Other Liabilities	.....	.....	.....	.....	25,093 20	22,579 16
Total Liabilities	13,739 44	13,488 58	14,011 62	13,714 04	121,325 98	116,424 08
Reserves						
Debentures Paid	260 56	511 42	810 38	1,107 96	17,596 21	19,098 83
Sinking Fund Reserve	.....	.....	4,358 00	4,560 00	2,337 94	2,659 16
Depreciation Reserve	275 00	565 00	2,000 00	2,550 00	1,650 00	3,377 00
Surplus	451 05	608 48	3,539 75	3,867 34	706 37	1,064 40
Total Liabilities and Reserves	14,726 05	15,173 48	24,719 75	25,799 34	143,616 50	142,623 47
Percentage of Net Debt to Total Assets	93.3	89.9	56.6	53.0	84.5	81.5

"c" Dominion War Loan Investment.

"A"—Continued

of Hydro Municipalities as at December 31st, 1916 and 1917

Mitchell 1,687		Durham 1,600		Exeter 1,572		New Hamburg 1,543	
1916	1917	1916	1917	1916	1917	1916	1917
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
4,796 10	5,646 10	.....	.....	.....	.....	2,257 59	2,317 59
9,034 86	9,034 86	584 88	584 88	.....	.....	1,083 10	1,083 10
8,119 67	8,350 53	11,917 19	12,222 48	11,693 79	11,961 77	8,281 57	8,451 78
.....	.....	.....	.....	.....	.....	.....	.....
1,113 82	1,113 82	971 92	1,720 42	1,494 04	2,445 11	2,664 75	3,272 54
2,827 43	3,472 06	1,059 18	1,108 04	2,276 12	2,390 48	3,257 25	3,482 52
1,063 55	1,063 55	699 56	699 56	721 38	721 38	1,149 43	1,149 43
.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	547 24	547 24	1,451 48	1,459 48	958 48	1,001 70
1,500 00	1,500 00	.....	.....	.....	.....	.....	.....
.....	.....	2,300 00	1,506 51	.....	.....	5,242 56	5,242 56
28,455 43	30,180 92	18,079 97	18,389 13	17,636 81	18,978 22	24,894 73	26,001 22
.....	2,334 06	213 04	126 07	.....	3,144 31	789 57	507 65
945 38	1,089 77	.....	19 27	546 70	1,478 70	4,246 78	4,128 60
2,385 79	416 79	.....	50 00	457 20	110 00	646 13	1,837 31
.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	b *103 41*	b *1,252 80*	.....	.....	.....	.....
31,786 60	34,021 54	18,396 42	19,837 27	18,640 71	23,711 23	30,577 21	32,474 78
9,919 45	8,514 55	12,646 61	17,136 07	17,240 08	19,141 00	16,163 22	15,800 16
450 00	1,062 00	5,396 42	1,267 28	378 87	247 79	242 67	420 00
986 85	.....	.....	.....	65 92	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....
11,356 30	9,576 55	18,043 03	18,403 35	17,684 87	19,388 79	16,405 89	16,220 16
7,375 77	8,780 67	353 39	863 92	419 05	859 05	1,565 86	1,928 92
.....	.....	.....	.....	.....	.....	.....	.....
5,377 21	6,627 21	.....	570 00	.....	615 00	4,675 00	5,575 00
7,677 32	9,037 11	.....	.....	536 79	2,848 39	7,930 46	8,750 70
31,786 60	34,021 51	18,396 42	19,837 27	18,640 71	23,711 23	30,577 21	32,474 78
35.7	28.2	.....	.....	95.4	82.0	53.7	50.0

"b" Operating losses shown in italics.

STATEMENT

Comparative Condensed Balance Sheets of Electric Departments

Municipality	Dresden		Victoria Harbor		Blenheim	
Population	1,521		1,477		1,424	
——	1916	1917	1916	1917	1916	1917
ASSETS	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Lands and Buildings	.....	.....	.....	.....	.....	.....
Sub-Station Equipment	523 00	523 00	.....	.....	909 64	909 64
Dist. System, Overhead	6,011 99	6,014 04	4,727 86	4,727 86	9,543 23	10,498 02
" Underground	.....	.....	.....	.....	.....	.....
Line Transformers	1,418 21	1,418 21	600 00	716 22	1,330 76	1,472 84
Meters	2,743 76	2,746 76	1,154 47	1,276 73	2,085 93	2,324 45
Street Light Equip. Regular	715 38	728 53	127 81	145 69	823 67	825 18
" Ornamental	.....	.....	.....	.....	1,475 64	1,492 13
Miscel. Equip.and Con.Exp	404 24	404 24	642 64	642 64	568 06	602 17
Steam or Hydraulic Plant	.....	.....	.....	.....	.....	.....
Old Plant	5,766 54	5,621 16	.....	.....	.....	.....
Total Plant	17,583 12	17,455 94	7,252 78	7,509 14	16,736 93	18,124 43
Bank and Cash Balance	814 27	458 59	208 74	491 54	836 08	816 76
Inventories	610 46	893 17	.....	.....	.....	200 00
Accounts Receivable	.....	.....	.....	.....	151 78	.....
Sinking Fund	.....	.....	.....	.....	.....	.....
Other Assets	.....	.....	.....	.....	.....	.....
Total Assets	19,007 85	18,807 70	7,461 52	8,000 68	17,724 79	19,141 19
LIABILITIES AND RESERVES						
Liabilities						
Debenture Balance	15,340 47	14,702 57	6,313 59	6,116 93	13,822 92	13,635 21
Accounts Payable	2,433 84	1,733 84	.....	.....	1,737 78	315 59
Bank Overdraft	.....	.....	.....	.....	.....	.....
Other Liabilities	.....	117 98	.....	.....	.....	d1,482 97
Total Liabilities	17,774 31	16,554 39	6,313 59	6,116 93	15,560 70	15,435 77
Reserves						
Debentures Paid	897 78	1,535 68	186 41	383 07	177 08	364 79
Sinking Fund Reserve	.....	.....	.....	.....	.....	.....
Depreciation Reserve	314 74	629 74	190 00	440 00	440 00	990 00
Surplus	21 02	87 89	771 52	1,060 68	1,547 01	2,352 63
Total Liabilities and Reserves	19,007 85	18,807 70	7,461 52	8,000 68	17,724 79	19,143 19
Percentage of Net Debt to Total Assets	92.0	87.8	84.6	76.8	87.9	81.0

"d" Local Improvement Debentures, *re* Ornamental Street Lighting.

"A"—Continued

of Hydro Municipalities as at December 31st, 1916 and 1917

Harriston 1,404		Pt. Dalhousie 1,318		Caledonia 1,217		Norwich 1,189	
1916	1917	1916	1917	1916	1917	1916	1917
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
.....	.....	.....	.....	.....	.....	910 40	910 40
600 00	600 00	.....	.....	.....	.....	.....	.....
6,948 25	7,585 16	3,658 63	3,816 73	4,881 97	5,629 03	6,708 36	6,925 09
.....	.....	.....	.....	.....	.....	.....	.....
1,740 00	1,873 48	2,541 43	3,304 33	565 65	565 65	1,541 12	1,934 06
1,915 66	2,371 38	3,647 85	3,984 43	947 44	951 04	2,476 93	2,553 41
350 00	350 00	268 67	268 67	441 49	449 21	546 06	548 46
.....	.....	.....	.....	.....	.....	1,811 96	1,956 25
413 73	430 83	1,093 66	1,206 16	473 20	473 20	969 34	969 34
.....	.....	.....	.....	.....	.....	.....	.....
2,062 15	1,130 83	6,325 50	6,370 53	.....	.....	3,509 82	3,509 82
14,029 79	14,341 68	17,535 74	18,950 85	7,309 75	8,068 13	18,473 99	19,306 83
122 98	213 28	50 03	124 97	419 20	711 86	494 65	2,436 34
671 00	1,250 00	89 76	89 76	.....	.....	1,903 54	2,494 65
966 00	1,498 82	181 21	51 70	.....	.....	1,755 04	1,897 65
.....	.....	.....	.....	.....	.....	.....	.....
b *28 35*	.....	.....	b *564 58*	.....	.....	.....	.....
15,818 12	17,303 78	17,856 74	19,781 86	7,728 95	8,779 99	22,627 22	26,135 47
12,846 89	12,351 74	12,121 97	11,725 04	4,450 40	4,355 71	12,717 24	12,458 25
2,155 09	1,774 26	1,913 12	2,371 21	90 05	.....	1,333 64	3,057 51
.....	.....	2,060 00	2,761 63	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....
15,001 98	14,126 00	16,095 09	16,857 88	4,540 45	4,355 71	14,050 88	15,515 76
471 14	966 29	378 03	774 96	173 60	268 29	1,038 76	1,297 75
.....	.....	.....	.....	.....	.....	.....	.....
345 00	810 00	1,279 02	2,149 02	1,070 00	1,390 00	3,595 00	5,450 00
.....	1,401 49	104 60	.....	1,944 90	2,765 99	3,942 58	3,871 96
15,818 12	17,303 78	17,856 74	19,781 86	7,728 95	8,779 99	22,627 22	26,135 47
94.8	81.6	90.1	88.0	58.8	49.6	62.1	59.5

"b" Operating losses shown in italics.

STATEMENT

Comparative Condensed Balance Sheets of Electric Departments

Municipality Population	Forest 1,570	Watford 1,217	New Toronto 1,186		Waterford 1,134	
——	1917	1917	1916	1917	1916	1917
ASSETS	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Lands and Buildings	4,500 00	.....	.....	.....	.....	.....
Sub-Station Equipment	.....	.....	.....	.....	.....	.....
Dist. System, Overhead	3,551 75	6,020 64	11,167 80	22,602 94	2,116 17	2,105 81
" Underground	.....	.....	.....	.....	.....	.....
Line Transformers	2,291 95	1,614 30	2,964 38	4,306 84	914 36	1,161 11
Meters	4,188 54	1,793 43	2,319 68	6,037 38	1,331 10	1,449 20
Street Light Equip.Regular	1,340 50	500 90	310 30	366 96	81 26	103 10
" Ornamental	.....	.....	.....	.....	.....	.....
Miscel. Equip.and Con.Exp.	102 30	1,306 03	1,200 37	1,378 82	352 77	366 02
Steam or Hydraulic Plant	.....	.....	.....	.....	.....	.....
Old Plant	19,874 95	2,031 91	.....	.....	5,151 53	5,057 53
Total Plant	35,849 99	13,267 21	17,962 53	34,692 94	9,947 19	10,242 77
Bank and Cash Balance	879 25	704 00	1,717 13	3,564 72	277 97	95 20
Inventories	2,210 86	33 30	124 77	135 00	.....	80 00
Accounts Receivable	702 50	7 62	97 92	253 89	205 79	566 52
Sinking Fund	.....	.....	.....	.....	.....	.....
Other Assets	.....	.....	.....	.....	.....	.....
Total Assets	39,642 60	14,012 13	19,902 35	38,646 55	10,430 95	10,984 49
LIABILITIES AND RESERVES						
Liabilities						
Debenture Balance	30,655 27	9,410 64	7,620 39	7,481 00	5,811 26	4,766 31
Accounts Payable	2,847 63	2,590 05	6,218 49	18,640 27	2,325 82	361 40
Bank Overdraft	.....	.....	.....	.....	.....	714 60
Other Liabilities	.....	1,011 41	.....	.....	97 98	.....
Total Liabilities	33,502 90	13,012 10	13,838 88	26,121 27	8,235 06	5,842 31
Reserves						
Debentures Paid	3,744 73	302 57	379 61	519 00	1,934 27	2,979 22
Sinking Fund Reserve	.....	.....	.....	.....	.....	.....
Depreciation Reserve	.....	.....	1,200 00	2,200 00	.....	.....
Surplus	2,394 97	697 46	4,483 86	9,806 28	261 62	2,162 96
Total Liabilities and Reserves	39,642 60	14,012 13	19,902 35	38,646 55	10,430 95	10,984 49
Percentage of Net Debt to Total Assets	84.6	93.0	69.6	67.7	79.0	53.2

"A"—Continued

of Hydro Municipalities as at December 31st, 1916 and 1917

Shelburne 1,115		Elora 1,115		Hagersville 1,105		Winchester 1,065	
1916	1917	1916	1917	1916	1917	1916	1917
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
.....	.....	.....	.....	.....	.....	224 15	224 15
566 60	566 60	.....	.....	.....	.....	.....	.....
9,137 23	10,590 59	7,539 37	7,920 03	6,678 90	6,743 81	7,319 95	7,477 25
.....	.....	.....	.....	.....	.....	.....	.....
399 01	985 66	1,791 53	3,737 14	1,203 27	1,203 27	665 86	665 86
391 75	612 97	1,564 27	1,788 63	2,021 32	2,138 50	1,241 04	1,246 44
921 65	921 65	438 33	438 33	435 35	435 35	564 98	564 98
.....	.....	.....	.....	.....	.....	.....	.....
2,102 07	2,116 90	926 18	926 18	101 80	101 80	275 54	343 94
.....	.....	.....	.....	.....	.....	.....	.....
3,779 40	3,755 90	1,408 35	1,408 35	.....	.....	1,100 00	1,100 00
17,297 71	19,550 27	13,668 03	16,218 66	10,440 64	10,622 73	11,391 52	11,622 62
2,346 82	568 83	642 51	104 35	2,829 55	1,331 60	1,236 43	.....
12 20	158 54	1,034 54	1,129 28	67 77	251 39	1,476 81	3,880 62
.....	111 41	42 21	.....	.....	.....	.....	117 54
.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	c 2,500 00	.....	.....
19,656 73	20,389 05	15,387 29	17,452 29	13,337 96	14,705 72	14,104 76	15,620 78
14,468 79	13,995 01	12,339 48	12,010 89	7,591 30	7,420 07	10,372 52	10,221 17
4,180 99	4,355 85	534 52	26 45	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	186 07
.....	.....	.....	.....	.....	.....	.....	.....
18,649 78	18,350 86	12,874 00	12,037 34	7,591 30	7,420 07	10,372 52	10,407 24
451 21	924 99	660 52	989 11	408 70	579 93	277 48	428 83
.....	.....	.....	.....	.....	.....	.....	.....
.....	475 00	835 00	1,335 00	1,305 00	1,735 00	1,335 00	1,760 00
555 74	638 20	1,017 77	3,090 84	4,032 96	4,970 72	2,119 76	3,024 71
19,656 73	20,389 05	15,387 29	17,452 29	13,337 96	14,705 72	14,104 76	15,620 78
94.9	88.0	83.7	69.3	56.9	50.4	73.5	66.7

"c" Dominion War Loan Investment.

STATEMENT

Comparative Condensed Balance Sheets of Electric Departments

Municipality	Port Credit		Arthur	Beaverton		Tavistock
Population	944		1,035	1,015		1,014
——	1916	1917	1917	1916	1917	1917
ASSETS	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Lands and Buildings	675 00	675 00	.....	250 00	250 00	.....
Sub-Station Equipment	.....	.....	.....	.....	.....	.....
Dist. System, Overhead	8,313 48	8,421 66	12,746 86	5,901 74	5,967 62	5,607 50
" Underground	.....	.....	.....	.....	.....	.....
Line Transformers	812 48	892 98	1,092 29	470 75	761 45	710 79
Meters	1,851 63	1,944 53	1,023 58	1,836 96	1,887 74	1,806 68
Street Light Equip.Regular	324 63	360 64	539 71	453 44	453 44	542 95
" Ornamental	.....	.....	.....	.....	.....	.....
Miscel. Equip.and Con.Exp.	626 31	626 31	146 78	1,141 32	1,485 67	569 84
Steam or Hydraulic Plant	.....	.....	.....	.....	.....	.....
Old Plant	.....	.....	1,209 03	3,787 92	3,787 92	.....
Total Plant	12,603 53	12,921 12	16,758 25	13,842 13	14,593 84	9,237 76
Bank and Cash Balance	645 28	531 69	446 20	441 27	655 49	509 16
Inventories	.....	.....	74 00	213 40	1,239 48	190 00
Accounts Receivable	180 00	180 00	15 00	.....	.....	8 34
Sinking Fund	.....	.....	.....	.....	.....	.....
Other Assets	.....	c 60 00	.....	.....	.....	.....
Total Assets	13,428 81	13,692 81	17,293 45	14,496 80	16,488 81	9,945 26
LIABILITIES AND RESERVES						
Liabilities						
Debenture Balance	7,876 16	7,656 20	14,810 27	9,525 51	14,351 28	5,909 69
Accounts Payable	226 02	24 56	2,164 48	3,514 05	495 09	1,097 87
Bank Overdraft	.....	.....	.....	.....	.....	.....
Other Liabilities	.....	.....	.....	.....	.....	2,100 00
Total Liabilities	8,102 18	7,680 76	16,974 75	13,039 56	14,846 37	9,107 56
Reserves						
Debentures Paid	623 84	843 80	189 73	474 49	648 72	90 31
Sinking Fund Reserve	.....	.....	.....	.....	.....	.....
Depreciation Reserve	2,051 00	2,571 00	.....	300 00	630 00	305 00
Surplus	2,651 79	2,597 25	128 97	682 75	363 72	442 39
Total Liabilities and Reserves	13,428 81	13,692 81	17,293 45	14,496 80	16,488 81	9,945 26
Percentage of Net Debt to Total Assets	60.3	56.1	98.0	90.0	90.1	91.6

"c" Dominion War Loan Investment.

"A"—Continued

of Hydro Municipalities as at December 31st, 1916 and 1917

Markdale 989		Stayner 972		Cannington 903		Milverton 893	
1916	1917	1916	1917	1916	1917	1916	1917
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
.....	.....	.....	.....	.....	.....	206 00	237 20
780 80	780 80	200 00	200 00	.....	.....	.....	.....
5,983 31	6,323 93	7,530 29	7,722 85	6,227 12	6,694 48	5,266 42	5,889 32
.....	.....	.....	.....	.....	.....	.....	.....
378 50	984 35	1,350 14	1,246 34	1,017 63	1,376 87	783 10	2,166 64
841 94	1,107 29	1,224 79	1,316 99	1,797 14	2,197 54	773 09	1,205 04
522 62	530 79	478 16	526 31	533 48	533 48	505 36	509 82
.....	.....	.....	.....	.....	.....	.....	.....
549 06	587 06	287 77	310 33	367 58	406 58	161 84	557 93
.....	.....	.....	.....	.....	.....	.....	.....
2,080 65	2,080 65	4,213 01	4,133 01	3,609 37	3,609 37	.....	.....
11,136 88	12,394 87	15,284 16	15,455 83	13,552 32	14,818 32	7,695 81	10,565 95
72 44	2,080 35	861 70	403 08	355 01	468 26	102 54	935 26
2,230 68	1,694 91	51 19	8 84	668 00	699 38	141 30	.....
.....	122 00	416 47	918 56	247 40	117 17	2,000 00	1,000 00
.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	b *393 52*	b *382 72*	.....	.....
13,440 00	16,292 13	16,613 52	16,786 31	15,216 25	16,485 85	9,939 65	12,501 21
8,886 16	8,766 08	12,929 70	12,484 89	11,659 58	11,475 20	9,227 50	8,940 01
3,236 98	5,275 96	1,009 66	896 85	2,841 55	3,720 85	405 93	2,012 33
.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....
12,123 14	14,042 04	13,939 36	13,381 74	14,501 13	15,196 05	9,633 43	10,952 34
113 84	233 92	1,070 30	1,515 11	340 42	524 80	272 50	559 99
.....	.....	.....	.....	.....	.....	.....	.....
.....	340 00	695 00	1,115 00	375 00	765 00	.....	350 00
1,203 02	1,676 17	908 86	774 46	.....	.....	33 72	638 88
13,440 00	16,292 13	16,613 52	16,786 31	15,216 25	16,485 85	9,939 65	12,501 21
90.2	91.8	83.9	79.8	95.3	92.3	96.9	81.0

"b" Operating losses shown in italics.

STATEMENT

Comparative Condensed Balance Sheets of Electric Departments

Municipality	Dutton		Port Stanley		Chesterville	
Population	870		849		854	
——	1916	1917	1916	1917	1916	1917
ASSETS	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Lands and Buildings	.....	.....	1,505 38	1,505 38	.....	.....
Sub-Station Equipment	.....	.....	.....	.....	.....	.....
Distribution System, Over	5,124 93	5,165 79	9,509 81	9,970 11	4,958 20	5,108 43
" Underground	.....	.....	.....	.....	.....	.....
Line Transformers	778 24	778 24	1,495 56	1,864 96	1,002 48	1,930 73
Meters	1,599 88	1,726 34	1,960 26	2,122 93	1,082 96	1,190 16
Street Light Equip. Regular	441 01	441 01	570 60	570 60	306 46	306 46
" Ornamental	.....	.....	.....	.....	.....	.....
Miscel. Equip. and Con. Exp.	256 99	256 99	5,517 16	5,517 16	552 68	552 68
Steam or Hydraulic Plant	.....	.....	.....	.....	.....	.....
Old Plant	.....	.....	975 00	975 00	.....	.....
Total Plant	8,201 05	8,368 67	21,533 77	22,526 14	7,902 78	9,088 46
Bank and Cash Balance	1,766 37	2,632 27	5,551 04	5,072 71	100 25	409 57
Inventories	79 50	143 68	.....	.....	671 31	2,880 32
Accounts Receivable	.....	.....	.....	1,500 00	128 97	128 97
Sinking Fund	.....	.....	.....	.....	.....	.....
Other Assets	.....	c 100 00	.....	.....	.....	.....
Total Assets	10,046 92	11,244 32	27,084 81	29,098 85	8,803 31	12,507 32
LIABILITIES AND RESERVES						
Liabilities						
Debenture Balance	8,407 49	8,407 49	17,128 79	16,752 54	4,781 40	4,700 37
Accounts Payable	.....	.....	30 00	460 00	2,382 49	5,076 20
Bank Overdraft	.....	.....	.....	.....	334 94	.....
Other Liabilities	.....	.....	.....	5 00	120 00	.....
Total Liabilities	8,407 49	8,407 49	17,158 79	17,217 54	7,618 83	9,776 57
Reserves						
Debentures Paid	.....	.....	1,821 21	2,197 46	218 60	299 63
Sinking Fund Reserve	.....	.....	.....	.....	.....	.....
Depreciation Reserve	240 00	485 00	3,743 08	4,492 00	622 50	962 50
Surplus	1,399 43	2,351 83	4,361 73	5,191 85	343 38	1,468 62
Total Liabilities and Reserves	10,046 92	11,244 32	27,084 81	29,098 85	8,803 31	12,507 32
Percentage of Net Debt to Total Assets	83.6	74.5	63.4	59.4	86.5	80.6

"c" Dominion War Loan Investment.

"A"—Continued

of Hydro Municipalities as at December 31st, 1916 and 1917

Ayr 800		Waterdown 785		Thamesville 769		Bolton 727		West Lorne 651
1916	1917	1916	1917	1916	1917	1916	1917	1917
$ c.	$ c.	$ c.	$ c.	$ c.	$ c	$ c.	$ c.	$ c.
125 00	125 00	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....
2,985 40	2,988 35	7,083 27	7,187 26	3,600 40	3,669 39	7,220 79	7,342 27	4,983 83
.....	.....	.....	.....	.....	.....	.....	.....	.....
983 09	983 09	1,751 00	1,751 00	977 26	1,067 27	2,039 11	2,312 96	540 10
979 60	1,090 85	1,624 23	1,750 77	1,318 49	1,429 41	967 72	1,070 39	892 89
360 27	360 27	156 65	161 67	318 10	325 94	561 14	561 14	566 10
.....	.....	.....	.....	.....	.....	.....	.....	.....
785 49	785 49	100 34	100 34	561 75	561 75	811 17	864 20	174 49
.....	.....	.....	.....	.....	.....	.....	.....	.....
6,635 73	7,027 53	.....	.....	4,703 40	4,256 30	1,582 85	1,554 60	1,250 00
12 854 58	13,360 58	10,715 49	10,951 04	11,479 40	11,310 06	13,182 77	13,705 56	8,407 41
.....	985 76	1,767 75	1,613 34	689 33	290 35	76 71	498 12	74 97
58 84	27 60	.....	.....	240 00	542 21	364 76	443 79	.....
91 00	91 00	.....	133 50	988 96	888 98	148 75	70 00	93 00
.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	c 1,500 00	.....	.....	.....	.....	160 00
13,004 42	14,464 94	12,483 24	14,197 88	13,397 69	13,031 60	13,772 99	14,717 47	8,735 43
11,067 91	10,862 20	7,038 74	6,679 14	10,930 33	10,660 98	9,206 88	11,560 81	7,898 81
.....	220 77	.....	.....	1,081 64	168 36	2,730 35	49 00	123 73
55 70	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	116 87
11,123 61	11,082 97	7,038 74	6,679 14	12,011 97	10,829 34	11,937 23	11,609 81	8,139 41
993 67	1,641 18	961 26	1,320 86	257 47	526 82	293 12	450 76	101 19
.....	.....	.....	.....	.....	.....	.....	.....	.....
510 00	815 00	2,672 00	3,556 00	190 00	425 00	321 00	741 00	.....
377 14	925 79	1,811 24	2,641 88	938 25	1,250 44	1,221 64	1,915 90	494 83
13,004 42	14,464 94	12,483 24	14,197 88	13,397 69	13,031 60	13,772 99	14,717 47	8,735 43
85.6	76.6	56.4	47.4	89.5	83.3	86.7	79.0	93.2

"c" Dominion War Loan Investment.

STATEMENT

Comparative Condensed Balance Sheets of Electric Departments

Municipality	Dundalk		Bothwell		Lucan	
Population	721		707		662	
——	1916	1917	1916	1917	1916	1917
ASSETS	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Lands and Buildings	.....	.....	.....	.....	.....	.....
Sub-Station Equipment	.....	.....	.....	.....	.....	.....
Dist. System, Overhead	5,008 22	5,184 53	3,069 94	3,113 42	5,749 94	5,883 94
" " Underground	.....	.....	.....	.....	.....	.....
Line Transformers	551 73	551 73	499 55	695 88	1,442 57	1,696 58
Meters	479 20	615 15	969 30	1,004 36	1,431 76	1,735 45
Street Light Equip. Regular	510 82	510 82	326 10	326 10	372 54	372 54
" " " Ornamental	.....	.....	.....	.....	.....	.....
Miscel. Equip. and Con. Exp.	228 69	228 69	392 94	492 94	373 49	373 49
Steam or Hydraulic Plant	.....	.....	.....	.....	.....	.....
Old Plant	937 90	893 30	172 82	.....	2,860 45	2,860 45
Total Plant	7,716 56	7,984 22	5,430 65	5,632 70	12,230 75	12,922 45
Bank and Cash Balance	288 61	.....	247 86	1,270 86	47 62	.....
Inventories	36 76	2 79	.....	.....	731 09	464 67
Accounts Receivable	.....	.....	585 75	720 75	.....	.....
Sinking Fund	.....	.....	.....	.....	.....	.....
Other Assets	.....	.....	.....	c 200 00	.....	.....
Total Assets	8,041 93	7,987 01	6,264 26	7,824 31	13,009 46	13,387 12
LIABILITIES AND RESERVES						
Liabilities						
Debenture Balance	5,879 12	5,400 89	5,345 15	5,130 95	10,766 47	10,469 44
Accounts Payable	827 21	.....	.....	287 74	1,205 09	865 06
Bank Overdraft	.....	94 36	.....	.....	.....	184 77
Other Liabilities	.....	.....	.....	.....	.....	.....
Total Liabilities	6,706 33	5,495 25	5,345 15	5,418 69	11,971 56	11,519 27
Reserves						
Debentures Paid	457 78	936 01	189 04	403 24	447 15	744 18
Sinking Fund Reserve	.....	.....	.....	.....	.....	.....
Depreciation Reserve	200 00	240 00	135 00	320 00	270 00	625 00
Surplus	677 82	1,315 75	595 07	1,682 38	320 75	498 67
Total Liabilities and Reserves	8,041 93	7,987 01	6,264 26	7,824 31	13,009 46	13,387 12
Percentage of Net Debt to Total Assets	83.4	68.6	85.3	69.4	92.1	86.3

"c" Dominion War Loan Investment.

"A"—Continued

of Hydro Municipalities as at December 31st, 1916 and 1917

Hensall 705	Woodbridge 639		Rodney 712	Ailsa Craig 586		Grand Valley 657	Creemore 585	
1917	1916	1917	1917	1916	1917	1917	1916	1917
$ c.	$ c.	$ c.	$ c.	6 c.	$ c.	$ c.	$ c.	$ c.
.....	.....	.....	.....	.....	.....	36 50	.....	.....
6,390 58	5,924 17	6,004 20	4,977 93	4,406 27	4,693 64	7,608 38	4,181 44	4,575 19
1,154 42	1,945 29	1,945 29	780 54	657 46	1,412 56	685 05	681 39	681 39
1,670 56	1,008 59	1,077 75	980 74	547 49	725 77	957 33	844 47	895 46
410 85	319 61	319 61	518 74	362 97	362 97	455 61	272 07	272 07
447 50	515 86	511 40	653 97	229 97	229 97	201 17	185 41	185 41
.....	.....	.....	.....	.....	.....	.....	.....	.....
400 00	.....	.....	700 00	.....	.....	919 85	2,651 15	2,651 15
10,473 91	9,713 52	9,858 25	8,611 92	6,204 16	7,424 91	10,863 89	8,815 93	9,260 67
2,840 78	744 66	758 25	207 49	534 57	485 71	585 02	739 69	373 47
52 35	.....	53 09	.....	162 44	147 18	213 05	210 22	64 54
65 00	91 41	98 39	.....	.....	.....	62 20	74 65	73 34
.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	c 500 00	.....	.....	.....	b *70 94*	.....	.....
13,432 04	10,549 59	11,267 98	8,819 41	6,901 17	8,057 80	11,794 65	9,840 49	9,772 02
9,861 95	8,382 63	8,251 97	8,382 66	6,426 65	6,882 64	10,700 97	6,136 01	5,937 48
3,049 65	369 88	27 64	113 05	140 79	.....	794 65	2,637 36	1,651 23
.....	.....	.....	.....	.....	.....	.....	.....	.....
76 25	.....	.....	.....	.....	.....	.....	.....	.....
12,987 85	8,752 51	8,279 61	8,495 71	6,567.44	6,882 64	11,495 62	8,773 37	7,588 71
138 05	117 34	248 00	117 34	.....	.....	299 03	363 99	562 52
.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	725 00	1,085 00	.....	180 00	425 00	.....	200 00	430 00
306 14	954 74	1,655 37	206 36	153 73	750 16	.....	503 13	1,190 79
13,432 04	10,549 59	11,267 98	8,819 41	6,901 17	8,057 80	11,794 65	9,840 49	9,772 02
91.5	82.9	73.2	96.4	95.2	85.6	98.5	89.2	77.9

"b" Operating losses shown in italics.
"c" Dominion War Loan Investment.

STATEMENT

Comparative Condensed Balance Sheets of Electric Departments

Municipality	Coldwater		Wyoming		Embro	
Population	579		544		483	
——	1916	1917	1916	1917	1916	1917
ASSETS	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Lands and Buildings	275 00	275 00	.....	.....	.....	.....
Sub-Station Equipment	.....	.....	.....	.....	.....	.....
Dist. System, Overhead	5,295 16	5,327 11	5,105 92	5,199 97	5,415 37	5,415 37
" " Underground	.....	.....	.....	.....	.....	.....
Line Transformers	1,010 77	1,010 77	471 17	559 47	657 79	657 79
Meters	1,193 44	1,193 44	607 77	681 81	902 16	902 16
Street Light Equip. Regular	354 20	354 20	342 72	262 32	209 29	209 29
" " " Ornamental	.....	.....	.....	.....	.....	.....
Miscel. Equip. and Con. Exp.	132 53	132 53	544 50	735 00	249 84	249 84
Steam or Hydraulic Plant	.....	.....	.....	.....	.....	.....
Old Plant	.....	.....	.....	.....	426 25	426 25
Total Plant	8,261 10	8,293 05	7,072 08	7,438 54	7,860 70	7,860 70
Bank and Cash Balance	1,177 47	1,798 45	305 89	.....	489 68	160 62
Inventories	538 71	.....	.....	.....	.....	84 00
Accounts Receivable	.....	269 00	128 00	.....	57 96	15 36
Sinking Fund	.....	.....	.....	.....	.....	.....
Other Assets	.....	.....	.....	.....	.....	.....
Total Assets	9,977 28	10,360 50	7,505 97	7,438 54	8,408 34	8,120 68
LIABILITIES AND RESERVES						
Liabilities						
Debenture Balance	6,693 83	6,580 35	6,313 77	6,117 10	.....	.....
Accounts Payable	90 00	83 07	915 11	514 09	7,520 95	6,905 40
Bank Overdraft	.....	.....	.....	121 82	.....	.....
Other Liabilities	.....	.....	.....	.....	.....	.....
Total Liabilities	6,783 83	6,663 42	7,228 88	6,753 01	7,520 95	6,905 40
Reserves						
Debentures Paid	306 17	419 65	186 23	382 90	94 82	194 38
Sinking Fund Reserve	.....	.....	.....	.....	.....	.....
Depreciation Reserve	1,460 00	1,810 00	.....	210 00	485 00	760 00
Surplus	1,427 28	1,467 43	90 86	92 63	307 57	260 90
Total Liabilities and Reserves	9,977 28	10,360 50	7,505 97	7,438 54	8,408 34	8,120 68
Percentage of Net Debt to Total Assets	68.9	64.3	96.4	90.8	89.4	85.2

"A"—Continued

of Hydro Municipalities as at December 31st, 1916 and 1917

Flesherton 428		Spring-field k	Burgess-ville k	Woodville 388		Chatsworth 374	
1916	1917	1917	1917	1916	1917	1916	1917
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
.....	.....	.....	.....	.....	.....	65 00	65 00
.....	.....	.....	.....	.....	.....	.....	.....
3,910 09	3,910 09	3,733 26	2,008 90	1,597 02	1,670 90	3,502 90	3,507 03
.....	.....	.....	.....	.....	.....	.....	.....
206 83	206 83	671 74	567 81	700 96	700 96	546 92	546 92
482 48	518 74	686 32	359 22	765 20	765 20	418 03	437 43
384 61	384 61	199 52	122 82	95 67	104 81	207 29	207 29
.....	.....	.....	.....	.....	.....	.....	.....
814 11	814 11	672 78	453 00	88 96	98 96	283 12	312 12
.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	2,250 00	2,182 50	.....	.....
5,798 12	5,834 38	5,963 62	3,511 75	5,497 81	5,523 33	5,023 26	5,075 79
1,705 24	625 43	348 90	.....	149 35	311 14	.....	.....
433 80	396 39	137 59	28 00	315 16	316 89	.....	.....
54 23	558 23	140 00	495 59	35 65	99 24	150 00	324 00
.....	.....	.....	.....	.....	.....	175 00	140 00
.....	.....	.....	.....	.....	.....	.....	b *20 71*
7,991 39	7,414 43	6,590 11	4,035 34	5,997 97	6,250 60	5,348 26	5,560 50
5,417 22	5,330 30	4,602 44	3,304 00	3,885 65	3,824 18	4,000 00	4,000 00
2,097 41	1,531 19	17 10	248 26	1,997 97	1,626 43	892 33	1,076 54
.....	.....	.....	147 52	.....	.....	200 57	178 96
.....	.....	1,483 10	.....	.....	.....	.....	.....
7,514 63	6,861 49	6,102 64	3,699 78	5,883 62	5,450 61	5,092 90	5,255 50
82 78	169 70	397 56	196 00	114 35	175 82	.....	.....
.....	.....	.....	.....	.....	.....	175 00	140 00
150 00	175 00	.....	.....	.....	230 00	.....	165 00
243 98	208 24	89 91	139 56	.....	394 17	80 36	.....
7,991 39	7,414 43	6,590 11	4,035 34	5,997 97	6,250 60	5,348 26	5,560 50
94.1	92.6	93.0	91.6	98.0	87.3	95.2	94.8

"b" Operating losses shown in italics.
"k" Less than 500 population.

STATEMENT

Comparative Condensed Balance Sheets of Electric Departments

Municipality Population	Baden k		Brechin k		Beachville k	
——	1916	1917	1916	1917	1916	1917
ASSETS	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Lands and Buildings	660 64	660 64	.....	.....	161 03	161 03
Sub-Station Equipment	.....	.....	.....	.....	.....	.....
Dist. System, Overhead	3,997 98	4,430 75	1,330 29	1,330 29	6,310 36	6,353 65
" " Underground	.....	.....	.....	.....	.....	.....
Line Transformers	1,285 14	1,285 14	366 43	366 43	1,736 69	1,714 74
Meters	877 53	903 08	315 62	315 62	873 72	893 47
Street Light Equip. Regular	370 02	370 02	69 89	69 89	237 03	237 03
" " " Ornamental	.....	.....	.....	.....	.....	.....
Miscel. Equip. and Con. Exp.	.....	.....	215 77	215 77	540 36	533 36
Steam or Hydraulic Plant	.....	.....	.....	.....	.....	.....
Old Plant	.....	.....	.....	.....	.....	.....
Total Plant	7,191 31	7,649 63	2,298 00	2,298 00	9,859 19	9,893 28
Bank and Cash Balance	2,128 12	1,891 16	693 89	1,497 31	360 90	1,141 47
Inventories	.....	74 60	.....	27 66	42 24	82 41
Accounts Receivable	.....	.....	45 91	121 07	1,176 02	241 25
Sinking Fund	.....	.....	.....	.....	.....	.....
Other Assets	.....	.....	.....	.....	.....	.....
Total Assets	9,319 43	9,615 39	3,037 80	3,943 98	11,438 35	11,358 41
LIABILITIES AND RESERVES						
Liabilities						
Debenture Balance	4,581 66	4,488 10	1,713 66	1,696 00	4,904 99	4,826 26
Accounts Payable	586 67	731 35	941 52	1,678 74	679 50	37 92
Bank Overdraft	.....	.....	.....	.....	.....	.....
Other Liabilities	2 79	.....	.....	.....	.....	.....
Total Liabilities	5,171 12	5,219 45	2,655 18	3,374 74	5,584 49	4,864 18
Reserves						
Debentures Paid	418 34	511 90	36 34	54 00	455 01	526 74
Sinking Fund Reserve	.....	.....	.....	.....	.....	.....
Depreciation Reserve	1,132 00	1,247 40	70 00	145 00	1,720 00	2,125 00
Surplus	2,597 97	2,636 64	276 28	370 24	3,678 85	3,842 49
Total Liabilities and Reserves	9,319 43	9,615 39	3,037 80	3,943 98	11,438 35	11,358 41
Percentage of Net Debt to Total Assets	55.7	54.3	87.4	86.0	49.1	42.8

"k" Less than 500 population.

"A"—Continued

of Hydro Municipalities as at December 31st, 1916 and 1917

Burford k		Comber k		Dublin k	Drumbo k		Delaware k	
1916	1917	1916	1917	1917	1916	1917	1916	1917
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
202 00	202 00	.....	.....	85 00	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....
3,470 99	3,597 65	3,622 99	3,665 73	3,939 83	2,582 58	2,646 78	2,101 21	2,101 21
.....	.....	.....	.....	.....	.....	.....	.....	.....
983 23	983 23	420 25	420 25	660 75	316 55	316 55	216 75	216 75
879 88	912 36	631 13	631 83	478 99	614 51	664 63	316 06	316 06
147 40	213 40	199 55	199 55	411 71	129 89	129 89	106 93	106 93
.....	.....	.....	.....	.....	.....	.....	.....	.....
659 20	671 00	929 11	929 11	320 08	201 16	201 16	227 81	203 81
.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....
6,342 70	6,579 64	5,803 03	5,846 47	5,896 36	3,844 69	3,959 01	2,968 76	2,944 76
248 36	628 37	114 66	85 74	768 67	926 68	468 84	262 71	315 60
.....	80 53	.....	16 80	1,174 25	63 41	.....	.....	.....
.....	.....	.....	114 63	83 33	.....	462 97	985 64	1,022 52
.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....
6,591 06	7,288 54	5,917 69	6,063 64	7,922 61	4,834 78	4,890 82	4,217 11	4,282 88
4,690 01	4,523 30	4,221 02	4,535 03	5,000 00	4,361 15	4,286 47	3,939 79	3,876 57
1,300 45	923 52	1,217 33	127 70	2,639 58	42 77	.....	42 29	71 12
.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	512 10	.....	.....	.....	24 00	.....
5,990 46	5,446 82	5,438 35	5,174 83	7,639 58	4,403 92	4,286 47	4,006 08	3,947 69
309 99	476 70	278 98	514 97	.....	138 89	213 53	60 21	123 43
.....	.....	.....	.....	.....	.....	.....	.....	.....
165 00	373 00	145 00	322 00	.....	110 00	245 17	80 00	180 00
125 61	992 02	55 36	51 84	283 03	182 01	145 65	70 82	31 76
6,591 06	7,288 54	5,917 69	6,063 64	7,922 61	4,834 78	4,890 82	4,217 11	4,282 88
90.9	75.1	91.9	85.3	96.8	91.1	87.9	95.0	92.1

"k" Less than 500 population.

STATEMENT

Comparative Condensed Balance Sheets of Electric Departments

Municipality Population	Dorchester k		Elmvale k		Granton k	
——	1916	1917	1916	1917	1916	1917
ASSETS	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Lands and Buildings	.....	.....	106 25	106 25	.....	.....
Sub-Station Equipment	.....	.....	.....	.....	.....	.....
Dist. System, Overhead	2,889 39	2,941 03	5,799 59	5,871 65	2,671 73	2,819 42
" " Underground	.....	.....	.....	.....	.....	.....
Line Transformers	694 32	929 59	755 41	755 41	221 22	623 16
Meters	659 71	769 69	1,050 50	1,164 04	445 47	605 28
Street Light Equip. Regular	212 34	212 34	317 98	317 98	149 27	149 27
" " " Ornamental	.....	.....	.....	.....	.....	.....
Miscel. Equip. and Con. Exp.	326 54	326 54	455 93	455 93	110 28	110 28
Steam or Hydraulic Plant	.....	.....	.....	.....	.....	.....
Old Plant	.....	.....	.....	.....	.....	.....
Total Plant	4,782 30	5,179 19	8,485 66	8,671 26	3,597 97	4,307 41
Bank and Cash Balance	206 94	163 20	154 40	472 00	262 28	.....
Inventories	.....	.....	548 55	489 81	.....	.....
Accounts Receivable	430 10	522 13	140 11	105 00	.....	.....
Sinking Fund	.....	.....	.....	.....	.....	.....
Other Assets	.....	.....	.....	.....	.....	.....
Total Assets	5,419 34	5,864 52	9,328 72	9,738 07	3,860 25	4,307 41
LIABILITIES AND RESERVES						
Liabilities						
Debenture Balance	4,235 28	4,167 32	6,545 88	6,417 81	3,455 73	3,408 80
Accounts Payable	.....	368 36	150 00	.....	254 27	417 53
Bank Overdraft	.....	.....	.....	.....	.....	40 87
Other Liabilities	.....	.....	.....	.....	.....	.....
Total Liabilities	4,235 28	4,535 68	6,695 88	6,417 81	3,710 00	3,867 20
Reserves						
Debentures Paid	64 72	132 68	454 12	582 19	44 27	91 20
Sinking Fund Reserve	.....	.....	.....	.....	.....	.....
Depreciation Reserve	350 00	535 00	1,025 00	1,355 00	.....	145 00
Surplus	769 34	661 16	1,153 72	1,283 07	105 98	204 01
Total Liabilities and Reserves	5,419 34	5,864 52	9,328 72	9,738 07	3,860 25	4,307 41
Percentage of Net Debt to Total Assets	78.1	77.5	71.8	65.8	96.1	90.0

"k" Less than 500 population.

"A"—Continued

of Hydro Municipalities as at December 31st, 1916 and 1917

Holstein k		Highgate k	Lambeth k		Lynden k		Mount Brydges k	
1916	1917	1917	1916	1917	1916	1917	1916	1917
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
.....	.....	.....	.....	.....	241 18	241 18	.....	.....
1,649 25	1,649 25	3,346 69	2,606 19	2,709 30	2,489 73	2,492 73	2,650 77	2,652 77
305 33	145 33	1,464 37	621 01	626 66	942 37	942 37	673 25	655 25
192 42	192 42	714 32	639 78	910 43	424 91	531 82	691 83	764 55
141 25	141 25	282 15	169 37	159 37	137 90	137 90	120 09	120 09
164 71	164 71	393 65	204 73	214 73	200 32	200 32	143 82	143 82
.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....
2,452 96	2,292 96	6,201 18	4,241 08	4,620 49	4,436 41	4,546 32	4,279 76	4,336 48
142 49	328 09	2 76	107 07	292 63	213 24	751 59	743 06	810 04
83 71	.....	136 52	.....	.....	.....	.....	20 00	55 61
51 16	110 67	140 51	63.10	35 00	304 57	67 50	52 88	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....
b *57 73*	b *123 83*	.....	.....	.....	.....	.....	.....	.....
2,788 05	2,855 55	6,480 97	4,411 25	4,948 12	4,954 22	5,365 41	5,095 70	5,202 13
2,676 01	2,585 22	4,924 74	3,939 79	3,876 57	4,432 95	4,367 48	4,100 27	4,035 40
26 00	18 50	1,216 26	98 47	279 08	220 00	.....	672 69	290 39
.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....
2,702 01	2,603 72	6,141 00	4,038 26	4,155 65	4,652 95	4,367 48	4,772 96	4,325 79
86 04	176 83	75 26	60 21	123 43	62 05	127 52	119 73	184 60
.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	75 00	.....	100 00	260 00	120 00	270 00	125 00	275 00
.....	.....	264 71	212 78	409 04	119 22	600 41	78 01	416 74
2,788 05	2,855 55	6,480 97	4,411 25	4,948 12	4,954 22	5,365 41	5,095 70	5,202 13
100.0	96.5	94.8	91.5	84.4	93.9	81.6	93.7	83.0

"b" Operating losses shown in italics.
"k" Less than 500 population.

STATEMENT

Comparative Condensed Balance Sheets of Electric Departments

Municipality Population	Otterville k		Plattsville k		Princeton k	
——	1916	1917	1916	1917	1916	1917
ASSETS	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Lands and Buildings						
Sub-Station Equipment						
Dist. System, Overhead	2,546 60	2,746 85	2,482 86	2,482 86	1,910 44	1,957 32
" " Underground						
Line Transformers	479 75	972 80	1,270 58	906 14	680 74	437 77
Meters	473 40	532 09	891 11	895 64	479 00	457 15
Street Light Equip. Regular	193 37	196 10	133 65	133 65	116 30	116 30
" " " Ornamental						
Miscel. Equip. and Con. Exp.	142 00	142 00	504 42	504 42	32 85	32 85
Steam or Hydraulic Plant						
Old Plant						
Total Plant	3,835 12	4,589 84	5,282 62	4,922 71	3,219 33	3,001 39
Bank and Cash Balance	163 69		221 66	1,068 66	908 69	404 95
Inventories	59 50	95 82	11 24	6 99		
Accounts Receivable	516 30	153 90	713 27	449 60	5 72	444 32
Sinking Fund						
Other Assets		b *169 38*			b *18 33*	35 00
Total Assets	4,574 61	5,008 94	6,228 79	6,447 96	4,152 07	3,885 66
LIABILITIES AND RESERVES						
Liabilities						
Debenture Balance	4,377 67	4,248 00	5,075 41	4,988 51	3,440 46	3,381 55
Accounts Payable	60 00	88 87	217 19		506 07	
Bank Overdraft		266 07				
Other Liabilities						
Total Liabilities	4,437 67	4,602 94	5,292 60	4,988 51	3,946 53	3,381 55
Reserves						
Debentures Paid	122 33	252 00	161 59	248 49	109 54	168 45
Sinking Fund Reserve						
Depreciation Reserve		154 00	145 00	305 00	96 00	220 00
Surplus	14 61		629 60	905 96		115 66
Total Liabilities and Reserves	4,574 61	5,008 94	6,228 79	6,447 96	4,152 07	3,885 66
Percentage of Net Debt to Total Assets	97.0	95.2	85.0	77.5		87.0

"b" Operating losses shown in italics.

"k" Less than 500 population.

"A"—Continued

of Hydro Municipalities as at December 31st, 1916 and 1917

Pt. McNicoll k		Rockwood k		Sunderland k		St. Jacob's k	St. George k	
1916	1917	1916	1917	1916	1917	1917	1916	1917
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
202 60	202 60	79 00	79 00	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....
3,259 63	3,311 41	4,150 53	4,191 30	2,826 66	2,892 18	3,326 83	2,838 77	2,852 65
.....	.....	.....	.....	.....	.....	.....	.....	.....
305 60	332 06	1,211 93	1,211 93	731 75	731 75	877 50	851 31	851 31
714 81	770 31	979 45	1,048 31	788 68	788 68	909 77	868 73	904 50
103 40	107 21	257 50	257 50	190 82	190 82	263 53	218 11	218 11
.....	.....	.....	.....	.....	.....	.....	.....	.....
396 44	396 44	308 05	308 05	147 22	147 22	441 66	374 18	374 18
.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	2,030 00	2,030 00	.....	.....	.....
4,982 48	5,120 03	6,986 46	7,096 09	6,715 13	6,780 65	5,819 29	5,151 10	5,200 75
.....	36 15	.....	.....	.....	319 44	224 65	1,959 09	1,066 09
57 86	30 10	73 45	197 13	94 93	132 30	.....	22 61	60 16
.....	237 00	.....	.....	720 44	95 54	150 00	.....	329 67
.....	.....	.....	.....	.....	.....	.....	.....	.....
b *271 26*	b *72 72*	.....	.....	.....	b *90 34*	.....	.....	c 1,500 00
5,311 60	5,496 00	7,059 91	7,293 22	7,530 50	7,418 36	6,213 94	7,132 80	8,156 67
4,377 67	4,720 01	1,217 71	997 09	5,546 32	5,452 29	6,000 00	5,829 78	5,737 58
56 29	102 08	.....	829 03	.....	1,308 36	89 96	330 33	412 83
625 31	99 92	1,796 60	324 23	1,467 13	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....
5,059 27	4,922 01	3,014 31	2,150 35	7,013 45	6,760 65	6,089 96	6,160 11	6,150 41
122 33	279 99	782 29	1,002 91	253 68	347 71	.....	170 22	262 42
.....	.....	.....	.....	.....	.....	.....	.....	.....
130 00	294 00	815 00	1,105 00	150 00	310 00	.....	150 00	325 00
.....	.....	2,448 31	3,034 96	113 37	.....	123 98	652 47	1,418 84
5,311 60	5,496 00	7,059 91	7,293 22	7,530 50	7,418 36	6,213 94	7,132 80	8,156 67
100.3	90.8	42.7	29.5	93.1	92.1	98.0	86.3	75.4

"c" Dominion War Loan Investment.
"k" Less than 500 population.

STATEMENT

Comparative Condensed Balance Sheets of Electric Departments

Municipality Population	Thorndale k		Thamesford k		Williamsburg k	
——	1916	1917	1916	1917	1916	1917
ASSETS	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Lands and Buildings						
Sub-Station Equipment						
Dist. System, Overhead	1,893 29	1,935 47	3,490 27	3,503 99	1,478 83	1,493 23
" " Underground						
Line Transformers	381 71	325 61	953 88	1,169 84	297 89	297 89
Meters	534 23	510 23	1,017 56	987 31	427 57	498 67
Street Light Equip. Regular	59 40	80 36	176 85	176 85	66 16	66 16
" " " Ornamental						
Miscel. Equip. and Con. Exp	273 95	273 95	158 25	158 25	4 00	4 00
Steam or Hydraulic Plant						
Old Plant						
Total Plant	3,142 58	3,125 62	5,796 81	5,996 24	2,274 45	2,350 95
Bank and Cash Balance	77 73	86 93	186 96	460 82	827 76	635 59
Inventories	45 39	41 80	20 00	25 00	121 70	476 95
Accounts Receivable	131 00	333 90	113 01	40 00		
Sinking Fund						
Other Assets						
Total Assets	3,396 70	3,588 25	6,116 78	6,522 06	3,223 91	3,463 49
LIABILITIES AND RESERVES Liabilities						
Debenture Balance	2,462 37	2,422 86	2,923 08	4,172 98	2,579 50	2,487 80
Accounts Payable	688 68	733 92	1,686 75	241 12	41 75	57 00
Bank Overdraft						
Other Liabilities				25 00		
Total Liabilities	3,151 05	3,156 78	4,609 83	4,439 10	2,621 25	2,544 80
Reserves						
Debentures Paid	37 63	77 14	134 92	185 05	170 50	262 20
Sinking Fund Reserve						
Depreciation Reserve	100 66	245 66	735 00	970 00	70 00	155 00
Surplus	107 36	108 67	637 03	927 91	362 16	501 49
Total Liabilities and Reserves	3,396 70	3,588 25	6,116 78	6,522 06	3,223 91	3,463 49
Percentage of Net Debt to Total Assets	92.8	88.5	75.3	68.0	81.3	73.5

"k" Less than 500 population.

"A"—Concluded.

of Hydro Municipalities as at December 31st, 1916 and 1917

Wellesley k	Waubaushene k		Grantham Township		Stamford Township	Toronto Township	
1917	1916	1917	1916	1917	1917	1916	1917
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
.....	.....	.....	.....	.....	388 80	.....	.....
.....	.....	.....	.....	.....	5,731 34	.....	.....
4,121 43	2,755 95	2,789 25	2,190 60	5,333 60	12,503 51	7,204 65	8,903 85
.....	.....	.....	.....	.....	.....	.....	.....
1,311 47	239 66	239 66	1,005 62	1,426 35	3,253 74	5,309 85	5,848 21
908 60	664 13	816 87	626 06	830 96	3,073 33	2,908 68	3,377 86
386 55	142 22	159 22	.....	.....	1,536 56	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....
93 57	257 66	257 66	78 19	110 19	2,595 80	258 16	649 77
.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	9,594 46	.....	.....
6,821 62	4,059 62	4,262 66	3,900 47	7,701 10	38,677 54	15,681 34	18,779 69
1,235 36	3 00	.....	3,195 78	209 44	.....	2,828 86	1,104 42
.....	3 28	5 33	.....	.....	.....	.....	38 38
.....	387 90	130 37	.....	801 43	1,267 11	914 56	2,100 56
.....	.....	.....	279 12	558 24	.....	.....	.....
.....	.....	.....	b *1,581 49*	b *1,661 14*	.....	.....	.....
8,056 98	4,453 80	4,398 36	8,956 86	10,931 35	39,944 65	19,424 76	22,023 05
7,296 12	3,891 26	3,304 00	7,500 00	7,500 00	.....	11,673 78	11,327 99
.....	49 00	47 29	1,177 74	2,609 11	37,381 85	1,349 56	1,472 69
.....	.....	36 58	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	115 87
7,296 12	3,940 26	3,387 87	8,677 74	10,109 11	37,381 85	13,023 34	12,916 55
203 88	108 74	196 00	.....	.....	.....	326 22	672 01
.....	.....	.....	279 12	558 24	.....	.....	.....
235 00	115 00	265 00	.....	264 00	1,200 00	3,734 00	5,729 00
321 98	289 80	549 49	.....	.....	1,362 80	2,341 20	2,705 49
8,056 98	4,453 80	4,398 36	8,956 86	10,931 35	39,944 65	19,424 76	22,023 05
90.8	86.5	88.1	.....	.....	93.8	67.1	58.5

"k" Less than 500 population.

STATE-

Report Showing Operation of Municipalities

Municipality	Months Covered by Report	Population	Plant Cost	Debenture Debt and Overdraft	Operation and Maintenance	Debenture Charges and Interest	Total Operation
			$ c.	$ c.	$ c.	$ c.	$ c.
Toronto	12	463,705	9,027,604 32	7,301,472 90	1,273,596 89	462,718 79	1,936,315 68
Hamilton	12	100,461	1,253,570 26	1,082,913 36	247,128 25	69,368 13	316,496 38
Ottawa	12	100,163	947,550 95	565,095 82	161,627 64	42,147 44	203,775 08
London	12	58,055	929,480 89	732,054 15	250,011 80	43,545 12	293,556 92
Brantford	12	25,420	304,661 82	235,810 45	64,195 51	17,221 00	81,416 51
Windsor	12	24,162	511,893 71	523,505 81	99,097 47	17,491 55	116,589 02
Peterborough	12	20,426	274,842 84	235,238 35	101,683 93	14,701 34	116,385 27
Kitchener	12	19,666	394,421 88	243,994 63	99,907 48	18,487 28	118,394 76
St. Catharines	12	17,880	289,172 32	232,595 92	69,055 49	15,354 35	84,409 84
St. Thomas	12	17,174	241,050 89	120,956 84	70,848 61	10,365 50	81,214 11
Stratford	12	17,081	275,688 30	181,475 19	54,494 60	18,011 96	72,506 56
Guelph	12	16,735	238,392 62	110,204 48	73,982 91	10,273 26	84,256 17
Port Arthur	12	14,307	688,917 94	502,101 03	87,194 00	50,539 14	137,733 14
Chatham	12	12,863	175,433 79	206,163 22	39,170 67	10,058 83	49,229 50
Owen Sound	12	11,910	157,005 30	77,733 21	44,979 52	11,281 56	56,261 08
Galt	12	11,852	299,229 92	193,697 93	67,996 82	16,208 78	84,205 60
Sarnia	12	11,676	304,526 57	282,119 09	56,224 95	20,548 16	76,773 11
Niagara Falls	12	11,147	200,061 59	117,299 10	43,593 19	11,051 98	54,645 17
Woodstock	12	10,084	160,792 38	62,997 20	38,261 76	7,281 89	45,543 65
Brockville	12	9,428	163,893 35	153,051 75	68,650 68	15,406 99	84,057 67
Welland	12	7,243	154,369 00	159,482 11	93,277 56	10,663 18	103,940 74
Barrie	12	6,453	110,842 06	40,494 75	19,568 35	6,052 29	25,620 64
Collingwood	12	6,361	69,456 87	39,047 83	49,807 42	3,304 77	53,112 19
Midland	12	6,258	94,024 32	33,851 59	24,590 31	3,809 04	28,399 35
Ingersoll	12	5,176	104,660 91	73,718 87	28,169 73	4,800 89	32,970 62
Walkerville	12	5,096	206,962 74	206,816 32	124,301 04	11,131 97	135,433 01
Waterloo	12	4,956	103,588 75	60,074 29	26,093 07	4,493 15	30,586 22
Goderich	12	4,655	87,469 79	54,132 32	14,308 82	4,868 44	19,177 26
Dundas	12	4,652	82,059 51	58,561 80	13,638 40	5,414 43	19,052 83
Preston	12	4,643	115,555 98	78,753 83	30,025 42	7,259 03	37,284 45
Paris	12	4,370	86,963 02	43,714 47	11,101 03	6,665 00	17,766 03
Wallaceburg	12	4,107	74,013 31	76,998 71	17,697 60	4,525 57	22,223 17
Simcoe	12	4,061	37,414 32	39,392 23	6,158 90	1,876 55	8,035 45
Brampton	12	4,041	86,001 40	59,197 20	24,331 34	4,769 85	29,101 19
St. Mary's	12	3,958	85,241 24	40,899 93	13,877 82	4,775 42	18,653 24
Penetang	12	3,928	47,775 37	26,782 51	14,100 15	1,980 06	16,080 21
Petrolea	12	3,891	49,164 69	48,599 26	13,261 58	3,934 47	17,196 05
Tillsonburg	12	3,084	45,050 76	34,712 15	14,862 23	2,539 23	17,401 46
Strathroy	12	2,998	47,886 36	47,209 78	11,831 90	3,135 73	14,967 63
Hespeler	12	2,940	33,881 73	23,015 60	11,238 41	3,089 65	14,328 06
Prescott	12	2,740	55,920 83	20,165 71	12,111 40	1,983 39	14,094 79
Orangeville	12	2,493	36,239 96	35,459 39	5,153 83	2,067 96	7,221 79
Listowel	12	2,326	37,892 85	39,394 83	8,921 10	2,978 83	11,899 93
Huntsville	12	2,326	21,895 99	22,809 39	17,216 62	1,647 41	18,864 03
Ridgetown	12	2,326	24,687 07	19,346 53	5,836 40	1,777 75	7,614 15
Elmira	12	2,270	22,353 81	18,893 31	5,709 10	1,352 10	7,061 20
Clinton	12	2,177	40,127 72	36,970 22	5,921 05	3,002 09	8,923 14
Weston	12	2,156	43,826 48	23,875 44	21,720 82	2,196 53	23,917 35
Milton	12	2,072	30,269 15	18,632 70	11,499 56	2,212 11	13,711 67
Mimico	12	1,976	38,166 80	26,703 05	8,276 89	2,711 55	10,988 44
Chesley	12	1,975	28,724 12	27,103 30	3,841 40	2,130 83	5,972 23
Seaforth	12	1,964	35,384 26	22,043 36	17,906 52	1,691 51	19,598 03
Mount Forest	12	1,941	29,681 94	24,174 24	4,755 78	1,816 16	6,571 94
Georgetown	12	1,905	32,502 73	19,194 59	14,006 52	2,088 33	16,094 85
Palmerston	12	1,843	23,011 26	26,379 45	4,617 66	1,841 43	6,459 09

MENT "B"

for Period ending December 31st, 1917

Revenue	Surplus	Depreciation	Surplus less Depreciation	Number of Consumers				PerCent. of Consumers to Population	H. P. taken in Dec. 1917
				Domestic	Com'l	Power	Total		
$ c.	$ c.	$ c.	$ c.						
2,028,956 91	292,641 23	258,174 17	34,467 06	41,358	8,940	1,982	52,280	† 11.3	56,561
397,071 48	80,575 10	41,594 85	38,980 25	14,340	1,668	526	16,534	† 16.5	13,338
254,303 01	50,527 93	37,115 00	13,412 93	8,636	1,167	204	10,007	† 9.9	6,390
369,677 34	76,120 42	33,937 78	42,182 64	9,036	1,261	328	10,625	† 18.3	8,863
107,354 91	25,938 40	9,500 00	16,438 40	2,559	363	37	2,959	† 11.6	2,983
130,193 98	13,604 96	10,721 00	2,883 96	3,882	471	97	4,450	† 17.5	1,996
127,248 92	10,863 65	7,120 00	3,743 65	4,152	671	122	4,945	24.2	4,038
144,852 52	26,457 76	14,000 00	12,457 76	2,712	577	157	3,446	17.5	4,653
117,190 74	32,780 90	9,800 00	22,980 90	2,833	270	52	3,155	† 17.6	4,454
98,393 70	17,179 59	12,088 46	5,091 13	2,524	472	112	3,108	18.1	2,144
87,427 07	14,920 51	9,550 00	5,370 51	2,492	388	112	2,992	17.5	1,879
104,922 26	20,666 09	11,400 00	9,266 09	2,202	505	87	2,794	16.7	3,529
189,179 41	51,446 27	.....	51,446 27	2,783	503	42	3,328	23.3	3,439
53,710 95	4,481 45	4,361 66	119 81	1,261	271	46	1,578	† 12.3	948
65,903 90	9,642 82	4,495 70	5,147 12	1,438	419	84	1,941	16.3	919
99,446 31	15,240 71	10,100 00	5,140 71	2,444	371	83	2,898	24.4	2,773
93,071 00	16,297 89	7,613 00	8,684 89	2,150	439	58	2,647	22.7	1,219
64,531 84	9,886 67	7,500 00	2,386 67	2,273	405	55	2,733	24.5	2,680
57,410 88	11,867 23	6,531 60	5,335 63	1,363	387	66	1,816	18.0	1,438
77,921 69	§ *6,135 98*	6,000 00	§ *12,135 98*	1,018	378	49	1,445	15.4	§ 317
110,852 41	6,911 70	5,660 00	1,251 70	593	94	23	710	† 9.8	5,907
33,781 22	8,160 58	2,928 00	5,232 58	942	253	19	1,214	18.8	596
57,083 34	3,971 15	2,550 00	1,421 15	835	236	41	1,112	17.5	1,785
33,792 97	5,393 62	3,650 00	1,743 62	822	186	35	1,043	16.7	1,186
40,563 04	7,592 42	3,130 00	4,462 42	679	196	53	928	17.9	954
152,162 67	16,729 66	6,343 00	10,386 66	1,883	225	71	2,179	*	1,877
38,172 10	7,585 88	4,175 00	3,410 88	694	155	59	908	18.3	851
25,498 36	6,321 10	3,450 00	2,871 10	539	150	10	699	15.0	290
26,649 31	7,596 48	2,930 00	4,666 48	783	175	38	996	† 21.4	709
42,771 53	5,487 08	3,930 00	1,557 08	843	186	35	1,064	22.8	1,115
24,329 04	6,563 01	2,500 00	4,063 01	581	161	5	747	17.1	448
27,618 83	5,395 66	1,752 00	3,643 66	489	157	16	662	16.1	506
10,288 88	2,253 43	1,216 00	1,037 43	79	103	16	198	4.9	157
34,390 37	5,289 18	3,100 00	2,189 18	771	162	27	960	23.8	934
22,819 55	4,166 31	3,340 00	826 31	583	161	30	774	19.5	397
17,575 90	1,495 69	2,000 00	*504 31*	199	93	14	306	7.8	457
18,481 23	1,285 18	1,120 00	165 18	292	150	34	476	12.2	306
21,905 23	4,503 77	1,940 00	2,563 77	400	165	20	585	18.9	507
16,897 45	1,929 82	1,270 00	659 82	375	153	11	539	17.9	348
18,226 08	3,898 02	1,220 00	2,678 02	312	86	11	409	13.9	348
16,614 28	2,519 49	2,190 00	329 49	370	100	14	484	17.7	252
8,392 17	1,170 38	1,000 00	170 38	144	82	4	230	9.2	168
12,073 37	173 44	960 00	*786 56*	243	125	12	380	16.3	199
20,438 96	1,574 93	775 00	799 93	270	82	3	355	15.3	681
10,847 99	3,233 84	560 00	2,673 84	205	98	5	308	13.2	139
9,708 97	2,647 77	870 00	1,777 77	238	91	13	342	19.0	161
9,984 21	1,061 07	920 00	141 07	246	115	7	368	16.9	107
27,497 54	3,580 19	1,930 00	1,650 19	530	90	10	630	29.2	772
14,992 63	1,280 96	1,037 00	243 96	174	70	6	250	12.1	297
13,480 05	2,491 61	1,400 00	1,091 61	704	39	11	754	*	198
7,200 74	1,228 51	715 00	513 51	185	81	10	276	14.0	119
23,665 11	4,067 08	1,425 00	2,642 08	298	112	13	423	21.5	569
9,112 23	2,540 29	895 00	1,645 29	176	107	4	287	14.8	132
20,428 83	4,333 98	1,580 00	2,753 98	319	90	22	431	22.6	248
8,095 80	1,636 71	585 00	1,051 71	171	71	2	244	13.2	96

† Competitive territory. § Operating only partly with Hydro power. Operating loss due to high cost of coal in 1917. * Includes customers in Sandwich East and Ford City.
Figures in italics indicate operating losses.

STATEMENT

Report Showing Operation of Municipalities

Municipality	Months Covered by Report	Population	Plant Cost	Debenture Debt and Overdraft	Operation and Maintenance	Debenture Charges and Interest	Total Operation
			$ c.	$ c.	$ c.	$ c.	$ c.
Fergus	12	1,776	20,008 03	15,300 22	4,850 79	1,132 74	5,983 53
Tilbury	12	1,740	14,276 15	13,488 58	3,412 41	1,075 29	4,487 70
Acton	12	1,735	18,039 24	13,392 04	7,059 93	1,096 40	8,156 33
Gravenhurst	12	1,702	56,518 43	35,197 52	7,015 69	3,814 22	10,829 91
Mitchell	12	1,687	30,180 92	9,576 55	7,531 01	1,831 00	9,362 01
Durham	12	1,600	18,384 13	18,403 35	2,474 52	1,804 40	4,278 92
Exeter	12	1,572	18,978 22	19,141 00	5,259 76	1,300 65	6,560 41
New Hamburg	12	1,543	26,001 22	15,800 16	6,826 18	1,170 91	7,997 09
Dresden	12	1,521	17,455 94	16,554 39	4,201 59	1,442 28	5,643 87
Forest	12	1,495	35,849 89	30,655 27	4,504 50	2,849 03	7,353 53
Vict. Harbor	12	1,477	7,509 14	6,116 93	1,252 43	543 93	1,796 36
Blenheim	12	1,424	18,124 43	15,435 77	4,482 13	1,116 02	5,598 15
Harriston	12	1,404	14,341 68	12,351 74	4,219 14	1,071 32	5,290 46
Pt. Dalhousie	12	1,318	18,950 85	16,857 88	3,860 39	1,240 84	5,101 23
Watford	3	1,221	13,267 21	13,012 10	660 20	267 69	927 89
Caledonia	12	1,217	8,068 13	4,355 71	1,302 87	361 72	1,664 59
Norwich	12	1,189	19,306 83	12,458 25	10,099 46	3,630 63	13,730 09
New Toronto	12	1,186	34,692 94	26,121 27	26,972 91	1,310 85	28,283 76
Waterford	12	1,133	10,242 77	5,842 31	4,304 62	1,467 39	5,772 01
Shelburne	12	1,115	19,550 27	18,350 86	2,735 92	1,373 10	4,109 02
Elora	12	1,115	16,218 66	12,010 89	4,839 15	1,093 91	5,933 06
Hagersville	12	1,105	10,622 73	7,420 07	4,574 40	550 80	5,125 20
Winchester	12	1,065	11,622 62	10,221 17	3,711 77	773 70	4,485 47
Pt. Credit	12	1,046	12,921 12	7,656 20	2,423 64	678 61	3,102 25
Arthur	12	1,041	16,758 25	16,974 75	1,728 34	953 49	2,681 83
Beaverton	12	1,015	14,593 84	14,351 28	3,457 66	769 86	4,227 52
Tavistock	13	1,009	9,237 76	9,107 56	4,961 85	470 07	5,431 92
Markdale	12	989	12,394 87	14,042 04	1,902 84	892 65	2,795 49
Stayner	12	972	15,455 83	13,381 74	2,270 03	1,220 61	3,490 64
Cannington	12	903	14,818 32	15,196 05	3,490 52	604 03	4,094 55
Milverton	12	893	10,565 95	10,952 34	4,264 20	765 33	5,029 53
Dutton	12	870	8,368 37	8,407 49	2,258 93	434 44	2,693 37
Pt. Stanley	12	849	22,526 14	17,217 54	7,157 21	1,232 82	8,390 03
Chesterville	12	854	9,088 46	9,776 57	3,973 99	532 64	4,506 63
Ayr	12	800	13,360 58	10,862 20	1,888 68	1,150 41	3,039 09
Waterdown	12	785	10,951 04	6,679 14	2,306 68	1,480 95	3,787 63
Thamesville	12	769	11,310 06	10,829 34	2,452 00	829 95	3,281 95
Hensall	11	749	10,473 91	12,987 85	1,649 97	613 39	2,263 36
Bolton	12	727	13,705 56	11,560 81	3,699 61	921 66	4,621 27
West Lorne	11	724	8,407 41	8,139 41	1,470 28	502 50	1,972 78
Dundalk	12	721	7,984 22	5,495 25	2,008 46	829 24	2,837 70
Bothwell	12	703	5,632 70	5,418 69	2,822 81	793 15	3,615 96
Lucan	12	662	12,922 45	11,519 27	4,335 15	886 03	5,221 18
Rodney	10	655	8,611 92	8,495 71	1,617 46	426 22	2,043 68
Grand Valley	12	644	10,863 89	11,495 62	1,553 26	932 67	2,485 93
Woodbridge	12	639	9,858 25	8,279 61	2,932 72	641 41	3,574 13
Ailsa Craig	12	586	7,424 91	6,249 75	2,247 93	390 14	2,638 07
Creemore	12	585	9,260 67	7,588 71	2,643 81	710 20	3,354 01
Coldwater	12	579	8,293 05	6,580 35	1,263 86	481 64	1,745 50
Wyoming	12	544	7,438 54	6,753 01	1,218 72	577 97	1,796 69
Embro	12	.....	7,860 70	6,905 40	1,333 39	390 30	1,723 69
Springfield	4	.....	5,963 62	6,102 64	504 25	273 78	778 03
Flesherton	12	.....	5,834 38	6,861 49	1,071 29	453 30	1,524 59
Woodville	12	.....	5,523 33	5,450 61	2,286 62	275 24	2,561 86
Chatsworth	12	.....	5,075 79	4,791 50	859 49	308 02	1,167 51

"B"—Continued

for Period ending December 31st, 1917

Revenue	Surplus	Depreciation	Surplus less Depreciation	Number of Consumers				PerCent. of Consumers to Population	H. P. taken in Dec. 1917
				Domestic	Com'l	Power	Total		
$ c.	$ c.	$ c.	$ c.						
7,642 33	1,658 80	650 00	1,008 80	177	93	8	278	15.7	112
4,935 13	447 43	290 00	157 43	132	80	5	217	12.5	68
9,033 92	877 59	550 00	327 59	200	65	9	274	15.8	199
12,966 19	2,136 28	1,727 00	409 28	251	69	9	329	19.3	209
11,971 80	2,609 79	1,250 00	1,359 79	212	104	22	338	20.0	168
3,684 05	*594 87*	570 00	*1,164 87*	170	71	1	242	15.1	72
9,466 21	2,905 80	615 00	2,290 80	170	87	3	260	10.2	145
9,717 33	1,720 24	900 00	820 24	184	69	9	262	16.9	157
6,025 74	381 87	315 00	*66 87*	206	105	1	312	20.5	73
8,266 98	913 45	.....	913 45	260	104	6	370	24.8	127
2,336 52	540 16	250 00	290 16	69	38	.....	107	7.2	28
6,953 77	1,355 62	550 00	805 62	212	84	3	299	21.0	83
7,185 30	1,894 84	465 00	1,429 84	132	68	6	206	14.6	90
5,302 05	200 82	460 00	*259 18*	330	32	8	370	*	73
1,625 35	697 46	.....	697 46	100	67	2	169	13.9	43
2,805 68	1,141 09	320 00	821 09	33	38	4	75	6.2	49
15,514 36	1,784 27	1,855 00	*70 73*	356	82	10	448	*	242
34,606 18	6,322 42	1,000 00	5,322 42	320	22	8	350	29.5	1,583
7,673 35	1,901 34	.....	1,901 34	100	42	1	143	12.7	107
4,666 48	557 46	475 00	82 46	133	74	4	211	18.0	172
8,506 13	2,573 07	500 00	2,073 07	123	64	2	189	16.0	161
6,432 45	1,307 25	430 00	877 25	138	68	4	210	19.0	141
5,815 42	1,329 95	425 00	904 95	162	47	1	210	19.7	78
3,596 83	494 58	520 00	*25 42*	162	33	3	198	18.9	71
2,810 80	128 97	.....	*128 97*	60	51	2	113	10.9	48
4,238 49	10 97	330 00	*319 03*	148	51	7	206	20.3	78
6,179 31	747 39	305 00	442 39	80	64	2	146	14.5	242
4,184 71	1,389 22	340 00	1,049 22	106	68	3	177	18.0	75
3,762 40	271 76	420 00	*148 24*	124	59	5	188	19.3	63
4,495 35	400 80	390 00	10 80	137	70	.....	207	22.9	66
5,984 69	955 16	350 00	605 16	65	59	4	128	14 3	195
3,890 77	1,197 40	245 00	952 40	114	54	1	169	19.7	43
9,944 07	1,554 04	748 92	805 12	323	67	6	396	*	65
5,971 87	1,465 24	340 00	1,125 24	87	45	2	134	13.6	83
4,039 92	1,000 83	305 00	695 83	92	48	2	142	17.8	42
5,488 89	1,701 26	884 00	817 26	101	31	4	136	*	71
3,329 14	547 19	235 00	312 19	145	70	.....	215	27.9	44
2,569 50	306 14	.....	306 14	89	36	2	127	16.9	31
5,735 53	1,114 26	410 00	704 26	78	44	5	127	17.5	95
2,467 61	494 83	.....	494 83	54	40	.....	94	12.9	26
3,499 83	662 13	240 00	422 13	80	76	4	160	22.2	97
4,558 31	942 35	185 00	757 35	86	45	2	133	18.9	52
5,889 65	668 47	355 00	313 47	103	39	10	152	22.9	146
2,250 04	206 36	.....	206 36	57	41	.....	98	14.9	26
2,415 44	*70 40*	.....	*70 40*	55	54	1	110	17.1	50
4,634 76	1,060 63	360 00	700 63	69	35	6	110	17.2	93
3,415 22	777 15	245 00	532 15	55	19	4	78	13.3	97
4,188 64	834 63	230 00	604 63	69	55	3	127	21.7	51
2,335 65	590 15	350 00	240 15	75	39	1	115	19.8	41
2,008 46	211 77	210 00	1 77	56	34	.....	90	16.5	31
2,009 98	286 29	275 00	11 29	60	31	2	93	.....	27
867 94	89 91	.....	89 91	37	19	1	57	.....	29
1,513 85	*10 74*	175 00	*185 74*	70	31	.....	101	.....	33
2,781 72	219 86	120 00	99 86	49	25	3	77	.....	73
1,191 44	23 93	165 00	*141 07*	37	23	.....	60	.....	17

* Rural and summer population create abnormal condition.
Figures in italics indicate operating losses.

STATEMENT

Report Showing Operation of Municipalities

Municipality	Months Covered by Report	Population	Plant Cost	Debenture Debt and Overdraft	Operation and Maintenance	Debenture Charges and Interest	Total Operation
			$ c.	$ c.	$ c.	$ c.	$ c.
Baden	12	.....	7,649 63	3,045 81	5,916 29	291 47	6,207 76
Brechin	12	.....	2,298 00	3,374 74	1,929 56	176 25	2,105 81
Beachville	12	.....	9,893 28	3,399 05	6,077 07	357 79	6,434 36
Burford	12	.....	6,579 64	4,746 82	1,353 55	421 49	1,774 04
Burgessville	13	.....	3,511 75	3,304 00	1,191 15	296 52	1,487 67
Comber	12	.....	5,846 47	5,174 83	1,339 35	436 58	1,775 93
Delaware	12	.....	2,944 76	3,876 57	447 78	196 97	644 75
Dorchester	12	.....	5,179 19	4,535.68	968 80	396 95	1,365 75
Drumbo	12	.....	3,959 01	4,286 47	657 60	278 54	936 14
Dublin	2	.....	5,896 36	7,639 58	118 20	10 61	128 81
Elmvale	12	.....	8,671 26	6,417 81	1,995 40	458 22	2,453 62
Granton	12	.....	4,307 41	3,867 20	964 74	267 70	1,232 44
Grantham Tp.	12	.....	7,701 10	10,109 11	1,242 31	2,662 79	3,905 10
Highgate	12	.....	6,201 18	6,141 00	1,077 34	316 02	1,393 36
Holstein	12	.....	2,292 96	2,603 72	414 86	242 72	657 58
Lambeth	12	.....	4,620 49	4,155 65	959 47	260 84	1,220 31
Lynden	12	.....	4,546 32	4,367 48	2,818 09	309 28	3,127 37
Mt. Brydges	12	.....	4,336 48	4,325 79	1,272 64	290 35	1,562 99
Otterville	12	.....	4,589 84	4,602 94	853 30	392 33	1,245 63
Plattsville	12	.....	4,922 71	4,988 51	1,772 27	340 67	2,112 94
Princeton	12	.....	3,001 39	3,381 55	804 48	248 97	1,053 45
Pt. McNicoll	12	.....	5,120 03	4,922 01	808 90	436 32	1,245 22
Rockwood	12	.....	7,096 09	2,150 35	1,586 34	338 50	1,924 84
Sunderland	12	.....	6,780 65	6,760 65	2,159 33	492 32	2,651 65
St. George	12	.....	5,200 75	6,150 41	1,381 43	387 83	1,769 26
St. Jacob's	3	.....	5,819 29	6,089 96	803 05	.....	803 05
Stamford Tp.	12	.....	38,677 54	37,381 85	11,635 22	2,591 55	14,226 77
Thorndale	12	.....	3,125 62	3,156 78	1,215 96	203 24	1,419 20
Thamesford	12	.....	5,996 24	4,172 98	1,601 11	266 91	1,868 02
Toronto Twp.	12	.....	18,779 69	12,916 55	4,103 62	3,345 64	7,449 26
Williamsburg	12	.....	2,350 95	2,487 80	850 54	220 67	1,071 21
Waubashene	12	.....	4,262 66	3,387 87	842 78	305 15	1,147 93
Wellesley	13	.....	6,821 62	7,296 12	3,503 46	548 31	4,051 77
Total		1,168,000 **	20,077,935 45	15,636,473 08	3,992,310 28	1,085,180 80	5,077,491 08

NOTE—Population in Villages estimated at 400

† Competitive territory.
* Rural or Summer populations create abnormal condition.
** Approximate.
Figures in italics indicate operating losses.

"B"—Concluded

for Period ending December 31st, 1917

Revenue	Surplus	Depreciation	Surplus less Depreciation	Number of Consumers				Per Cent. of Consumers to Population	H. P. taken in Dec. 1917
				Domestic	Com'l	Power	Total		
$ c.	$ c.	$ c.	$ c.						
6,764 31	556 55	310 00	246 55	58	23	5	86	.....	196
2,274 77	168 96	75 00	93 96	19	20	2	41	.....	50
7,563 50	1,128 64	405 00	723 64	44	12	3	59	.....	289
2,848 45	1,074 41	208 00	866 41	79	34	1	114	.....	34
1,625 40	137 73	.....	137 73	29	9	1	39	.....	47
2,024 15	284 22	177 00	71 22	39	36	.....	75	.....	22
705 69	60 94	100 00	*30 06*	24	12	.....	36	.....	8
1,637 81	272 06	185 00	87 06	70	11	2	83	.....	18
1,071 31	135 17	135 17	.....	38	22	.....	60	.....	15
411 84	283 03	.....	283 03	1	10	.....	11	.....	18
3,012 95	559 35	330 00	229 35	89	61	3	153	.....	63
1,475 47	243 03	145 00	98 03	42	16	1	59	.....	65
4,089 45	184 35	264 00	*79 65*	154	.....	.....	154	.....	25
1,658 07	264 71	.....	264 71	41	21	1	63	.....	17
634 22	*23 36*	75 00	*08 36*	26	15	.....	41	.....	6
1,576 57	356 26	160 00	196 26	65	13	1	79	.....	19
3,758 56	631 19	150 00	481 19	24	11	1	36	.....	83
2,051 72	488 73	150 00	338 73	58	20	2	80	.....	26
1,215 64	*29 99*	154 00	*183 99*	42	23	1	66	.....	23
2,549 30	426 36	160 00	276 36	60	22	2	84	.....	66
1,311 44	257 99	110 00	147 99	46	12	.....	58	.....	12
1,624 05	378 83	164 00	214 83	66	21	1	88	.....	24
2,801 49	876 65	290 00	586 65	77	15	3	95	.....	35
2,607 85	*43 80*	160 00	*203 80*	58	27	.....	85	.....	54
2,663 51	894 25	175 00	719 25	60	23	3	86	.....	33
927 03	123 98	.....	123 98	34	18	1	53	.....	10 2
16,789 57	2,562 80	120 00	1,362 80	193	3	12	208	.....	450
1,565 51	146 31	115 00	31 31	37	13	1	51	.....	39
2,393 90	525 88	235 00	290 88	63	28	3	94	.....	51
9,938 55	2,489 29	2,125 00	364 29	160	.....	.....	160	.....	135
1,295 54	224 33	85 00	139 33	42	10	1	53	.....	23
1,544 03	396 10	150 00	246 10	64	17	1	82	.....	24
4,608 75	556 98	235 00	321 98	68	28	3	99	.....	128
6,070,065 17	992,574 09	607,206 29	385,367 80	137,486	28,161	5,269	170,916	.....	157,048

STATE-

Comparative Detailed Operating Reports of Electric Departments of Hydro

Municipality	Toronto xa				
Population	463,705				
——	1913	1914	1915	1916	1917
EARNINGS	$ c.	$ c.	$ c.	$ c.	$ c.
Domestic Light	190,376 89	289,645 45	331,807 18	335,181 19	414 043 17
Commercial Light	233,799 04	305,534 31	291,907 92	272,243 06	297,459 72
Power	347,708 88	483,681 15	575,239 17	612,918 32	899,474 48
Street Light	344,933 79	364,214 17	350,085 97	361,920 32	365,794 63
Miscellaneous	29,891 21	39,651 98	40,076 70	108,735 53	52,184 91
Total	1,146,709 81	1,482,727 06	1,589,116 94	1,690,998 42	2,028,956 91
EXPENSES					
Power Purchased	255,986 26	323,586 97	430,830 00	529,180 54	684,470 50
Sub-Stn. Operation	32,216 66	42,667 33	42,890 24	44,866 07	65,925 51
" " Maint'ce...	11,510 69	23,560 14	17,243 40	35,187 08	21,615 27
Dist. System, Operation and Maintenance	50,693 34	59,013 81	59,782 15	53,175 40	41,721 92
Line Transformer M't'c'e...	3,396 98	5,218 22	6,768 29	4,976 03	9,108 62
Meter Maintenance	1,648 28	3,072 21	3,856 44	7,085 21	19,903 28
Consumers' Premises—Exp..	36,536 64	52,893 31	37,821 37	44,278 89	51,547 04
Street Light Sys., Operation and Maintenance	45,801 72	48,674 18	63,981 72	61,202 90	67,390 00
Promotion of Business.....	60,256 03	71,477 64	54,128 73	53,416 92	48,258 76
Billing and Collecting.....	43,581 71	50,028 39	64,825 42	72.579 07	89,315 94
Gen. Office, Sal. and Exp...	85,957 58	125,972 92	93,332 31	124,068 67	146,428 85
Undistributed Expenses....	44,304 25	54,191 98	57,693 43	33.762 17	10,135 83
Int. and Deb. Payments....	274,285 24	325,551 67	362,337 99	400,434 57	462,718 79
Miscellaneous Expenses....	.....	b 4,335 80	b 23,330 01	.....	b 17,775 37
Total Expenses	946,175 38	1,190,244 57	1,318,821 50	1,464,213 52	1,736,315 68
Surplus	200,534 43	292,482 49	270,295 44	226,784 90	292,641 23
Loss	.....	.....	.....	.....	.....
Depreciation Charge...	115,236 80	147,181 40	173,862 95	208,388 09	258,174 17
Surp. Less Depr. Chg..	85,297 63	145,301 09	96,432 49	18,396 81	34,467 06

xa Hydro Department operated separately.
" b " Patriotic contributions.

MENT "C"

Municipalities for the years ending Dec. 31st, 1913, 1914, 1915, 1916 and 1917

	Hamilton xa 100,461					Ottawa xa 100,163		
	1913	1914	1915	1916	1917	1913	1914	1915
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
	34,451 95	74,668 38	92,723 71	108,137 22	135,224 12	68,032 27	68,767 48	67,441 19
	25,453 99	35,125 57	34,754 72	36,126 03	36,740 19	53,438 04	51,769 72	46,636 99
	47,415 58	70,665 43	83,990 38	115 224 78	137,249 87	26,978 76	31,748 23	32,126 50
	2,250 89	51,154 36	86,244 98	80,815 73	80,855 11	49,199 57	50,439 29	56,813 66
	9,841 52	2,564 82	2,619 70	3,026 87	7,002 19	.....	186 11	225 48
	119,413 93	234,178 56	300,333 49	343,330 63	397,071 48	197,648 64	202,910 83	203,243 82
	47,307 65	78,968 72	103,922 98	121,982 71	150,389 18	50,750 00	55,512 39	53,018 54
	3,240 97	5,741 24	7,226 49	9,107 51	11,644 77	3,127 63	3,321 20	3,989 78
	94 01	653 61	1,644 78	2,012 08	530 50	107 58	300 81	588 81
	3,168 21	6,504 84	14,090 13	6,847 26	11,539 13	13,694 44	17,041 58	18,193 82
	1,216 21	505 26	921 70	1,067 67	5,413 92	245 82	1,996 40	635 82
	16 39	143 97	1,172 88	886 05	3,849 30	1,537 17	2,390 11	3,444 25
	2,693 70	2,782 23	4,061 03	3,556 22	5,401 47	10,572 43	6,082 30	2,534 80
	1,375 46	13,380 35	10,394 16	10,735 03	10,269 24	15,465 59	15,318 91	19,712 71
	4,391 01	3,999 76	3,443 77	3,752 54	3,830 37	1,008 50	1,060 00	3,118 79
	6,270 38	10,825 27	13,832 80	15,780 73	19,652 35	6,417 69	7,481 30	8,915 38
	3,623 22	12,894 66	17,083 98	17,740 82	19,345 98	6,941 68	9,604 33	11,699 46
	1,289 35	3,407 34	4,972 47	4,374 48	5,262 04	1,453 47	2,350 91	3,671 03
	30,201 49	46,398 68	60,759 61	61,266 73	69,368 13	30,961 54	38,002 88	40,365 58
	.....	.....	.....	.....	.....	.....	.....	.....
	104,888 05	186,205 93	243,526 78	259,109 83	316,496 38	142,283 54	160,463 12	169,888 77
	14,525 88	47,972 63	56,806 71	84,220 80	80,575 10	55,365 10	42,447 71	33,355 05
	.....	.....	.....	.....	.....	.....	.....	.....
	9,031 35	21,053 66	25,808 87	32,110 54	41,594 85	24,000 00	32,650 00	33,000 00
	5,494 53	26,918 97	30,997 84	52,110 26	38,980 25	31,365 10	9,797 71	355 05

xa Hydro Department operated separately.

STATEMENT

Comparative Detailed Operating Reports of Electric Departments of Hydro

Municipality	Ottawa xa		London xb			
Population	100,163		58,055			
——	1916	1917	1913	1914	1915	1916
EARNINGS						
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Domestic Light	72,875 12	81,506 24	41,172 64	57,473 08	57,184 75	71,146 90
Commercial Light	42,569 96	48,546 77	39,256 07	47,593 44	43,751 37	48,747 74
Power	42,996 39	63,173 09	79,659 78	130,936 35	148,567 23	180,204 33
Street Light	60,632 48	59,928 97	28,372 20	30,535 83	31,168 87	31,719 17
Miscellaneous	406 45	1,147 94	3,763 78	3,313 10	4,958 29	8,973 65
Total	219,480 40	254,303 01	192,224 47	269,851 80	285,630 51	340,791 79
EXPENSES						
Power Purchased	60,859 15	75,113 78	72,676 41	97,404 63	122,893 29	155,208 55
Sub-Stn. Operation	4,341 42	4,545 40	5,816 18	9,925 89	8,671 25	11,260 87
" " Maint'ce	132 82	16 95	519 81	767 40	135 79	329 76
Dist. System, Operation and Maintenance	17,787 91	17,476 61	5,342 67	3,850 78	5,220 69	6,069 41
Line Transformer M't'c'e.	683 36	56 16	1,674 88	760 87	94 82	839 69
Meter Maintenance	3,241 68	4,378 74	138 23	95 60	372 13	3,169 66
Consumers' Premises—Exp.	.....	.....	1,827 71	2,119 53	2,455 20	3,217 49
Street Light Sys., Operation and Maintenance	15,147 81	19,214 96	5,278 72	8,511 05	6,303 42	7,577 61
Promotion of Business	8,277 56	8,273 19	5,833 84	5,840 01	6,902 59	7,853 28
Billing and Collecting	13,722 50	15,751 84	6,738 13	9,126 81	10,762 84	10,560 10
Gen. Office, Sal. and Exp.	11,470 18	10,126 32	14,180 20	16,845 61	15,042 13	12,777 04
Undistributed Expenses	4,660 34	6,673 69	6,297 08	6,687 31	4,943 05	6,866 73
Int. and Deb. Payments	42,371 44	42,147 44	29,488 97	35,127 20	38,493 89	40,099 60
Miscellaneous Expenses	b 716 29	.....	.....	.....	2,776 28	4,500 56
Total Expenses	183,412 46	203,775 08	155,812 83	197,062 69	225,067 37	270,330 35
Surplus	36,067 94	50,527 93	36,411 64	72,789 11	60,563 14	70,461 44
Loss	.....	.....	.....	.....	.....	.....
Depreciation Charge	32,775 00	37,115 00	21,058 82	27,588 39	32,734 97	29,060 62
Surp. Less Depr. Chg.	3,292 94	13,412 93	15,352 82	45,200 72	27,828 17	41,400 82

xa Hydro Department operated separately.
xb Hydro and Water Departments under one management.
" b " Patriotic contributions.

"C"—Continued

Municipalities for the years ending Dec. 31st, 1913, 1914, 1915, 1916 and 1917

London xb 58,055	Brantford xa 25,420				Windsor xa 24,162			
1917	1914	1915	1916	1917	1914	1915	1916	1917
	e				f			
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
86,454 36	7,103 77	13,629 36	17,504 44	20,881 94	3,143 41	23,161 57	35,565 59	48,913 80
52,511 01	5,392 87	10,746 67	10,530 19	10,502 19	1,107 38	12,009 99	16,831 60	21,257 15
181,973 61	647 69	12,901 29	24,213 00	48,639 07	9 77	3,734 81	7,370 82	15,362 93
32,057 31	21,724 64	28,691 05	27,500 83	27,272 40	3,997 85	31,947 11	37,266 17	38,025 51
16,681 05	627 57	327 94	294 05	59 31	.....	961 07	2,768 13	6,634 59
369,677 34	35,496 54	66,296 31	80,042 51	107,354 91	8,258 41	71,814 55	99,802 51	130,193 98
174,989 99	12,999 65	24,661 13	33,566 59	47,842 34	4,330 41	38,849 61	51,655 51	63,579 76
10,937 43	1,069 43	2,111 85	2,975 10	3,192 17	408 67	2,588 72	2,466 76	2,761 25
2,028 10	7 84	177 02	114 98	238 87	.....	236 47	282 77	554 34
3,896 45	376 83	684 06	814 74	1,548 77	240 41	629 41	816 44	1,194 00
818 07	65 26	160 65	267 97	700 09	.....	48 49	157 84	127 48
4,830 52	10 08	199 00	167 27	342 68	.....	11 70	131 68	122 20
3,866 38	40	3 53	3 19	77 70	.....	222 87	750 40	739 09
6,708 67	1,460 00	3,420 03	3,110 37	2,134 05	.....	1,667 97	6,647 83	11,361 50
6,996 23	1,608 37	1,644 50	1,313 05	1,578 10	.....	1,455 58	1,301 56	1,349 85
11,260 91	994 63	1,625 66	1,819 63	2,071 08	441 36	2,416 24	4,661 77	6,254 32
11,888 53	1,069 66	1,443 91	1,371 24	2,836 94	2,170 90	3,821 74	4,922 46	5,724 04
10,873 75	215 98	798 48	1,210 57	1,632 72	.....	1,502 25	2,887 17	5,329 64
43,545 12	7,444 31	14,686 37	17,221 00	17,221 00	666 66	13,038 53	17,258 16	17,491 55
916 77	.....	.....	.....	.....	.....	.....	.....	.....
293,556 92	27,322 44	81,616 19	63,955 70	81,416 51	8,258 41	66,489 68	93,940 35	116,589 02
76,120 42	8,174 10	14,680 12	16,086 81	25,938 40	.....	5,324 87	5,862 16	13,604 96
.....	.....	.....	.....	.....	.....	.....	.....	.....
33,937 78	6,000 00	10,000 00	7,500 00	9,500 00	.....	.....	5,157 50	10,721 00
42 182 64	2,174 10	4,680 12	8,586 81	16,438 40	.....	5,324 87	704 66	2,883 96

xa Hydro Department operated separately.
xb Hydro and Water Departments under one management.
"e" 9 months' operation.
"f" 4 months' operation.

STATEMENT

Comparative Detailed Operating Reports of Electric Departments of Hydro

Municipality / Population	Peterboro' xb 20,426				Kitchener xe 19,266	
——	1914	1915	1916	1917	1913	1914
	e				p	
EARNINGS	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Domestic Light	8,661 71	27,991 24	31,020 72	40,043 65	16,558 82	17,757 08
Commercial Light	7,749 91	27,563 41	26,403 82	26,601 65	20,985 35	19,549 45
Power	7,013 23	30,185 83	36,597 04	46,235 49	38,368 34	49,173 17
Street Light	3,081 59	12,294 64	13,257 49	13,994 22	17,373 81	16,544 11
Miscellaneous	.....	.....	.....	373 91	1,268 87	1,726 92
Total	26,506 44	98,035 12	107,279 07	127,248 92	94,555 19	104,750 73
EXPENSES						
Power Purchased	11,920 90	45,240 12	48,888 66	65,174 37	33,359 47	40,275 75
Sub-Stn. Operation	840 05	3,269 50	2,498 52	2,444 10	4,892 72	4,282 95
" " Maint'ce...	9 08	313 85	464 58	301 84	1,175 64	294 68
Dist. System, Operation and Maintenance	996 31	4,632 71	7,963 09	7,948 46	1,575 15	4,411 10
Line Transformer M't'c'e...	26 35	178 43	387 43	836 95	205 39	20 35
Meter Maintenance	6 52	1,326 47	1,242 59	2,530 20	326 51	564 97
Consumers' Premises—Exp..	.....	.....	.....	.....	101 97	75 83
Street Light Sys., Operation and Maintenance	1,465 01	6,000 91	5,367 18	7,584 74	2,803 88	3,884 76
Promotion of Business	.....	.....	.....	.....	452 28	630 50
Billing and Collecting	242 70	2,125 05	2,865 07	4,151 97	1,901 40	2,259 54
Gen. Office, Sal. and Exp...	3,777 45	9,542 34	7,617 20	7,227 55	2,532 25	2,615 07
Undistributed Expenses....	214 94	821 47	1,756 07	3,483 75	1,966 04	1,966 38
Int. and Deb. Payments....	2,026 21	13,372 97	11,981 33	14,701 34	17,897 45	18,719 43
Miscellaneous Expenses....	.....	.....	.....	.....	.....	b 619 00
Total Expenses	21,525 52	86,823 82	91,031 72	116,385 27	69,190 15	80,620 31
Surplus	4,980 92	11,211 30	16,247 35	10,863 65	25,365 04	24,130 42
Loss	.....	.....	.....	.....	.....	.....
Depreciation Charge...	.....	7,500 00	6,250 00	7,120 00	10,980 79	12,884 05
Surp. Less Depr. Chg..	4,980 92	3,711 30	9,997 35	3,743 65	14,384 25	11,246 37

xb Hydro and Water Departments under one management.
xe Hydro and Gas Departments under one management.
"b" Patriotic contributions.
"e" 3 months' operation.
"p" 13 months' operation.

"C"—Continued

Municipalities for the years ending Dec. 31st, 1913, 1914, 1915, 1916 and 1917

Kitchener xe 19,266			St. Catharines xa 17,880				St. Thomas xe 17,174
1915	1916	1917	1914	1915	1916	1917	1913
			e				
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
19,108 60	20,876 63	24,051 18	2,013 49	9,540 70	16,419 57	24,275 56	11,125 50
16,807 15	17,323 67	17,494 18	412 75	3,810 11	5,925 49	6,024 34	16,097 41
54,732 50	62,436 31	84,818 46	12,742 98	25,193 30	40,688 67	71,138 36	36,550 26
17,017 43	18,621 19	16,155 08	944 63	11,579 42	15,261 33	15,318 53	10,989 22
2,714 76	2,428 77	2,333 62	44 28	522 83	519 18	433 95	361 15
110,380 44	121,686 57	144,852 52	16,158 13	50,646 36	78,814 24	117,190 74	75,124 04
47,644 33	59,814 81	77,868 54	9,328 14	19,191 12	29,827 81	50,215 87	31,435 85
3,727 21	3,888 64	4,601 21	579 90	1,617 35	2,235 46	2,818 33	2,452 25
465 16	621 93	1,954 58	46 19	237 97	53 27	269 95	913 99
4,193 45	4,392 79	2,665 90	249 06	2,069 73	1,994 66	2,102 00	1,580 22
21 76	28 05	400 93	640 56	242 25	1,290 92	2,130 23	47 57
384 57	442 18	592 57	152 97	254 38	221 07	408 56	53 40
127 92	24 07	.....	.....	.....	.....	.....	.....
1,699 89	1,976 07	2,062 98	443 16	1,281 13	1,693 72	1,363 16	2,405 21
169 29	118 17	310 04	981 77	1,459 99	1,238 73	1,334 97	.....
2,569 37	2,809 95	2,922 78	107 00	984 37	871 98	2,184 20	339 43
2,686 19	2,603 33	2,941 54	607 53	4,213 82	5,496 64	5,208 86	1,593 77
2,427 57	2,099 02	2,051 36	.....	250 93	555 21	1,019 36	739 67
18,436 93	18,474 43	18,487 28	1,105 87	9,724 03	12,411 67	15,354 35	7,402 65
1,265 63	1,244 84	1,535 05	.....	.....	.....	.....	.....
85,819 27	98,538 28	118,394 76	14,242 15	41,527 07	57,891 14	84,409 84	48,964 01
24,561 17	23,148 29	26,457 76	1,915 98	9,119 29	20,923 10	32,780 90	26,160 03
.....	.....	.....	.....	.....	.....	.....	.....
13,500 00	14,638 25	14,000 00	850 00	7,250 00	10,500 00	9,800 00	6,900 00
11,061 17	8,510 04	12,457 76	1,065 98	1,869 29	10,423 10	22,980 90	19,260 03

xa Hydro Department operated separately.
xe Hydro, Gas and Railway Departments under one management.
"e" 3 months' operation.

STATEMENT

Comparative Detailed Operating Reports of Electric Departments of Hydro

Municipality	St. Thomas xc				Stratford xa	
Population	17,174				17,081	
——	1914	1915	1916	1917	1913	1914
EARNINGS						
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Domestic Light	13,221 00	16,517 37	20,210 52	22,620 72	11,636 59	15,180 91
Commercial Light	13,480 75	13,422 48	15,145 47	14,843 27	17,033 98	16,336 30
Power	44,247 13	44,780 45	46,698 91	44,977 52	15,123 78	16,519 24
Street Light	11,025 36	14,199 64	14,690 24	14,633 50	12,120 00	12,120 00
Miscellaneous	869 76	984 54	1,413 94	1,318 69	69 33	1,319 04
Total	82,844 00	89,904 48	98,159 08	98,393 70	55,983 68	61,475 49
EXPENSES						
Power Purchased	38,279 18	44,655 44	47,539 96	49,706 40	22,028 75	25,875 69
Sub-Stn. Operation	2,571 06	2,567 38	2,575 16	3,736 63	1,651 06	1,557 16
" " Maint'ce..	80 40	107 33	603 07	1,374 38	200 54	16 70
Dist. System, Operation and Maintenance	2,989 04	5,392 80	3,621 55	3,731 70	1,630 72	2,515 22
Line Transformer M't'c'e.	77 64	154 75	47 02	616 58	148 48	1 56
Meter Maintenance	183 34	170 35	77 42	174 95	261 33	37 34
Consumers' Premises—Exp.	.....	.....	75 77	69 05	501 90	.....
Street Light Sys., Operation and Maintenance	3,023 53	2,454 54	2,834 07	3,961 21	1,509 91	926 11
Promotion of Business	.....	1,224 10	707 81	518 92	.....	62 45
Billing and Collecting	1,604 98	1,393 43	1,593 06	1,817 90	1,325 47	1,647 47
Gen. Office, Sal. and Exp.	2,733 80	3,037 32	2,949 91	2,431 27	2,339 27	1,918 44
Undistributed Expenses	967 72	2,248 54	1,934 95	2,709 62	211 15	1,211 78
Int. and Deb. Payments	7,406 14	8,359 74	8,314 07	10,365 50	10,536 75	12,989 75
Miscellaneous Expenses	.....	.....	.....	.....	.....	b 1,750 00
Total Expenses	59,916 83	71,765 72	72,873 82	81,214 11	42,345 33	50,724 89
Surplus	22,927 17	18,138 76	25,285 26	17,179 59	13,638 35	10,750 60
Loss	.....	.....	.....	.....	.....	.....
Depreciation Charge	7,350 00	8,735 00	9,800 00	12,088 46	3,420 00	4,631 50
Surp. Less Depr. Chg.	15,577 17	9,403 76	15,485 26	5,091 13	10,218 35	6,119 10

xa Hydro Department operated alone until end of 1915.
xc Hydro and Gas Departments under one management.
" b " Patriotic contributions.

"C"—Continued

Municipalities for the years ending Dec. 31st, 1913, 1914, 1915, 1916 and 1917

xb Stratford 17,081			xc Guelph 16,735				
1915	1916	1917	1913	1914	1915	1916	1917
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
16,967 58	20,108 76	26,614 85	11,528 09	16,920 54	15,514 10	17,221 76	19,379 44
14,766 75	14,803 08	16,385 81	15,075 61	15,923 51	12,692 86	13,710 72	13,760 01
18,178 84	23,506 12	27,846 16	42,091 34	38,148 46	38,404 28	48,369 83	57,380 71
15,466 32	15,753 20	16,114 98	9,500 04	9,590 66	9,298 95	9,518 72	9,767 93
1,449 46	760 70	465 27	2,531 74	1,516 42	1,947 98	2,710 64	4,634 17
66,828 95	74,931 86	87,427 07	80,726 82	82,099 59	77,858 17	91,531 67	104,922 26
31,081 79	37,453 45	39,675 72	32,473 66	30,460 41	37,292 12	45,528 08	54,937 68
1,752 93	1,615 03	1,693 35	1,700 14	540 50	1,254 90	43 22	106 81
71 99	391 78	206 74	1,076 44	733 05	1,468 03	1,255 04	2,518 94
1,985 74	1,896 78	3,298 83	3,004 51	3,897 65	1,592 39	1,888 83	2,124 77
44 37	19 20	79 47	179 90	161 05	240 75	148 83	415 27
153 44	76 04	371 29	585 91	711 63	756 35	912 62	858 77
.....	.....	.....	206 39	.....	.....	.....	.....
1,627 04	1,056 63	2,377 46	1,566 58	1,380 19	1,343 16	1,236 44	2,030 65
15 37	.....	.....	.....	.....	.....	.....	.....
2,007 92	1,948 60	2,259 85	430 35	2,257 35	2,695 89	2,616 35	3,068 02
1,900 16	1,577 91	1,194 88	3,424 77	3,003 77	3,710 93	3,233 54	3,411 77
1,934 03	2,497 66	3,337 01	1,760 98	2,351 61	2,943 66	3,393 91	2,621 97
14,398 80	14,794 02	18,011 96	10,273 27	10,273 27	10,273 28	10,273 28	10,273 28
b 3,752 52	.....	.....	x 884 95	x 834 02	x 976 72	x 1,927 63	x 1,888 24
60,726 10	63,327 10	72,506 56	57,567 85	56,604 50	64,548 18	72,457 77	84,256 17
6,102 95	11,604 76	14,920 51	23,158 97	25,495 09	13,309 99	19,073 90	20,666 09
.....	.....	.....	.....	.....	.....	.....	.....
5,250 00	7,500 00	9,550 00	8,000 00	10,200 00	10,500 00	10,700 00	11,400 00
852 86	4,104 76	5,370 51	15,158 97	15,295 09	2,809 99	8,373 90	9,266 09

xb Hydro and Water Departments together after 1915.
xc Hydro and Gas Departments under one management.
"b" Patriotic contributions.
"x" Motor repairs.

STATEMENT

Comparative Detailed Operating Reports of Electric Departments of Hydro

Municipality	Port Arthur xg					Chatham xa
Population	14,307					12,863
——	1913	1914	1915	1916	1917	1915
						m
EARNINGS	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Domestic Light	81,830 66	38,097 65	32,048 37	31,152 52	33,358 31	5,581 54
Commercial Light	*	32,933 91	28,662 58	27,439 63	28,235 05	2,806 81
Power	78,193 51	92,804 49	85,060 78	96,913 51	111,367 47	449 70
Street Light	14,709 41	15,458 88	15,514 61	15,207 40	15,614 02	7,616 36
Miscellaneous	.....	.....	1,247 52	269 92	604 56	.....
Total	174,733 58	179,294 93	162,533 86	170,982 98	189,179 41	16,454 41
EXPENSES						
Power Purchased	43,664 83	53,412 42	54,667 89	54,798 85	58,702 66	7,171 72
Sub-Stn. Operation	3,652 53	3,268 30	7,173 12	5,783 85	6,651 33	318 56
" " Maint'ce...	2,140 94	4,323 79	.....	585 15	149 22	23 48
Dist. System, Operation and Maintenance	9,013 80	8,003 88	6,357 20	2,987 89	4,700 89	102 09
Line Transformer M't'c'e.	1 75	454 62	284 10	695 92	218 63	15 25
Meter Maintenance	112 13	670 91	827 62	1,228 18	256 61	45 94
Consumers' Premises–Exp.	322 64	945 31	239 00	.....	.....	.....
Street Light Sys., Operation and Maintenance	1,543 03	2,146 96	1,764 92	1,297 59	1,709 43	396 40
Promotion of Business	361 85	100 85	416 67	102 95	.....	326 00
Billing and Collecting	2,630 19	5,324 25	3,296 52	2,261 85	3,422 49	810 65
Gen. Office, Sal. and Exp.	2,613 61	2,557 42	8,163 89	9,290 32	11,174 28	1,630 14
Undistributed Expenses	2,012 67	2,357 63	685 08	1,199 83	208 46	871 85
Int. and Deb. Payments	37,556 73	40,489 67	49,132 16	47,428 64	50,539 14	5,463 85
Miscellaneous Expenses	.....	.....	965 05	.....	.....	.....
Total Expenses	105,626 70	124,056 01	133,973 22	127,661 02	137,733 14	17,175 88
Surplus	69,106 88	55,238 92	28,560 64	43,321 96	51,446 27	.....
Loss	.....	.....	.....	.....	.....	721 47
Depreciation Charge	13,647 55	16,469 79	11,723 21	.....	.....	.....
Surp. Less Depr. Chg.	55.459 33	38,769 13	16,837 43	43,321 96	51,446 27	*721 47*

xa Hydro Department operated separately.
xg Hydro, Water, Railway and Telephone Departments under one management.
"m" 10 months' operation.
Italics denote losses.
* Domestic and Commercial combined.

"C"—Continued

Municipalities for the years ending Dec. 31st, 1913, 1914, 1915, 1916 and 1917

Chatham xa 12,863		Owen Sound xb 11,910		Galt xa 11,852				
1916	1917	1916	1917	1913	1914	1915	1916	1917
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
10,155 37	13,245 86	16,003 61	15,740 76	10,535 38	15,797 16	17,024 42	19,961 17	24,248 31
7,427 36	10,633 12	23,724 21	13,809 15	11,648 49	11,952 75	8,794 36	10,485 26	12,082 97
3,766 37	16,573 93	13,772 61	28,667 22	16,575 61	23,826 87	30,547 84	36,029 78	48,261 79
13,169 02	13,258 04	7,000 00	7,000 00	6,280 25	8,500 00	13,452 69	13,719 32	13,915 32
396 34	.....	700 70	686 77	194 00	919 15	373 24	45 00	937 92
34,914 46	53,710 95	61,201 13	65,903 90	45,233 73	60,995 93	70,192 55	80,240 53	99,446 31
15,427 10	25,225 66	25,067 12	30,966 00	17,883 91	21,134 48	29,961 84	41,098 16	52,262 63
1,053 43	1,962 79	5,439 60	6,114 24	1,761 14	1,930 96	2,283 95	2,774 79	3,256 62
50 20	110 82	.....	.....	180 76	99 42	280 66	89 72	160 67
839 35	1,404 20	2,742 65	1,882 98	446 24	1,729 80	1,499 76	1,795 06	1,671 05
68 62	710 13	468 48	308 90	11 48	129 05	120 76	15 55	228 52
92 43	167 33	318 35	618 82	2 00	91 88	57 81	185 80	188 82
535 22	58 97	.....	.....	.....	208 64	.....	160 76	.....
1,817 32	2,078 29	2,806 42	1,005 74	296 88	2,234 06	3,066 10	2,620 53	2,216 48
353 85	104 76	.....	.....	.....	.....	.....	.....	.....
1,624 56	1,445 41	1,119 74	1,117 62	1,188 20	1,868 30	2,226 16	2,566 98	2,862 75
2,079 44	4,980 28	3,120 54	2,394 96	1,792 40	1,618 71	2,713 64	3,298 27	4,252 81
1,515 83	922 03	806 41	570 26	.....	187 55	475 21	603 80	896 47
8,855 45	10,058 83	11,281 56	11,281 56	9,721 64	10,337 35	13,269 15	15,303 85	16,208 78
.....	.....	.....	.....	.....	.....	.....	.....	.....
34,312 80	49,229 50	53,170 87	56,261 08	33,284 65	41,570 20	55,955 04	70,513 27	84,205 60
601 66	4,481 45	8,030 26	9,642 82	11,949 08	19,425 73	13,766 11	9,727 26	15,240 71
.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	4,361 64	3,307 80	4,495 70	8,400 00	10,600 00	10,000 00	8,500 00	10,100 00
601 66	119 81	4,722 46	5,147 12	3,549 08	8,825 73	4,237 51	1,227 26	5,140 71

xa Hydro Department operated separately.
xb Hydro and Water Departments under one management.

STATEMENT

Comparative Detailed Operating Reports of Electric Departments of Hydro

Municipality Population	Sarnia xa 11,676		Niagara Falls xa 11,147		Brockville xf 9,428	
——	1916	1917	1916	1917	1916	1917
			h			
EARNINGS	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Domestic Light	*.....	25,655 32	21,733 29	22,566 76	12,897 12	14,507 95
Commercial Light	17,498 81	18,724 77	13,259 02	11,012 51	21,994 02	22,907 56
Power	12,640 12	33,693 36	9,613 91	18,804 36	15,828 62	30,744 84
Street Light	3,480 00	13,026 05	12,849 81	12,148 21	9,000 00	9,543 89
Miscellaneous	.....	1,971 50	9 84	.....	.....	217 45
Total	33,618 90	93,071 00	57,465 87	64,531 84	59,719 76	77,921 69
EXPENSES						
Power Purchased	**.....	35,061 33	15,391 75	25,343 42	8,754 44	9,313 90
Sub-Stn. Operation	9,289 42	6,779 04	3,516 04	3,870 60	14,304 71	38,981 91
" " Maint'ce...	.....	395 38	.....	.....	2,878 57	9,168 80
Dist. System, Operation and Maintenance	642 75	1,669 39	4,272 18	1,025 65	1,955 01	2,654 58
Line Transformer M't'c'e...	4 00	12 40	197 54	244 40	17 59	150 32
Meter Maintenance	.....	111 06	560 67	773 91	219 29	265 91
Consumers' Premises—Exp..	.....	5 44	.....	.....	.....	.....
Street Light Sys., Operation and Maintenance	137 26	765 94	3,959 08	3,171 35	494 27	1,240 60
Promotion of Business	.....	.....	.....	.....	851 48	961 18
Billing and Collecting	.....	1,500 54	1,795 99	2,220 02	566 28	571 02
Gen. Office, Sal. and Exp...	3,843 56	5,814 59	2,548 06	4,647 10	2,648 31	2,561 05
Undistributed Expenses....	1,037 33	4,109 84	1,920 19	2,296 74	892 28	1,420 23
Int. and Deb. Payments....	7,738 92	20,548 16	9,078 40	11,051 98	15,535 74	15,406 99
Miscellaneous Expenses....	.....	.....	.....	.....	b 1,325 54	b 1,361 18
Total Expenses	22,693 24	76,773 11	43,239 90	54,645 17	50,443 51	84,057 67
Surplus	10,925 69	16,297 89	14,225 97	9,886 67	9,276 25	.....
Loss	.....	.....	.....	.....	.....	6,135 98
Depreciation Charge...	.....	7,613 00	8,315 00	7,500 00	7,000 00	6,000 00
Surp. Less Depr. Chg..	10,925 69	8,684 89	5,910 97	2,386 67	2,276 25	*12,135 98*

xa Hydro Department operated separately.
xf Hydro, Gas and Water Departments under one management.
"b" Patriotic contributions.
Italics denote losses.
"h" 6 months' operation.
* Domestic and Commercial combined.
** Operated by natural gas in 1916.

"C"—Continued

Municipalities for the years ending Dec. 31st, 1913, 1914, 1915, 1916 and 1917

Woodstock xb 10,084					Welland xa 7,243			
1913	1914	1915	1916	1917	1913	1914	1915	1916
					f			
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
6,495 02	8,807 40	10,472 14	11,206 71	12,216 48	1,369 67	4,411 20	4,643 16	4,800 06
12,942 32	11,610 14	11,718 95	12,983 32	12,573 08	558 46	1,676 38	1,600 79	1,580 48
20,262 52	19,832 26	20,742 18	23,721 92	23,191 47	4,307 21	8,305 71	38,541 88	78,184 81
7,160 00	7,320 00	7,810 08	7,355 01	7,297 50	1,395 00	5,049 00	5,235 75	5,181 00
354 18	471 80	673 97	1,360 65	2,132 35	.....	.....	1,171 16	3,899 76
47,214 04	48,041 60	51,417 32	56,627 61	57,410 88	7,630 34	19,442 29	51,192 74	93,646 11
18,798 66	18,690 30	20,217 74	24,747 98	26,065 03	4,861 38	7,598 77	31,100 96	62,152 76
1,834 83	2,149 53	1,817 22	1,924 83	2,243 17	295 43	406 99	208 78	1,115 16
497 39	83 02	108 46	33 08	79 26	.....	32 30	96 66	387 59
1,827 65	1,566 91	1,654 10	2,068 72	3,111 78	191 18	138 94	590 33	841 42
4 84	23 75	74 94	128 08	.....	32 82	107 53	318 22	1,010 32
70 75	57 05	24 82	313 11	325 15	50	57 21	200 13	228 68
345 00	.....	.....	.....	.....	.....	.....	.....	.....
1,142 30	1,665 72	584 03	502 77	996 47	123 82	446 23	192 52	156 28
.....	.....	.....	.....	.....	.....	.....	.....	.....
1,115 75	1,628 44	1,443 25	1,722 35	1,757 61	317 42	748 38	455 39	541 14
2,513 73	3,050 10	3,007 93	2,794 11	2,747 61	798 53	2,790 59	3,720 01	5,431 25
447 96	581 45	972 96	1,077 89	685 68	39 45	10 25	420 97	624 60
6,853 83	7,219 04	7,290 95	7,241 71	7,281 89	2,638 54	5,080 20	8,474 79	8,199 77
.....	b 500 00	b1,000 00	b 1,000 00	b 250 00	.....	.....	.....	.....
35,806 87	37,215 31	38,196 40	43,554 63	45,543 65	9,299 07	17,417 39	45,778 76	80,688 97
11,407 17	10,826 38	13,220 92	13,072 98	11,867 23	.....	2,024 90	5,413 98	12,957 14
.....	.....	.....	.....	.....	1,668 73	.....	.....	.....
5,827 40	6,450 00	6,725 00	6,930 20	6,531 60	.....	.....	4,425 00	4,000 00
5,579 77	4,376 38	6,495 92	6,142 78	5,335 63	*1,668 73*	2,024 90	988 98	8,957 14

xa Hydro Department operated separately.
xb Hydro and Water Departments under one management.
"b" Patriotic contributions.
"f" 4 months' operation.
Italics denote losses.

STATEMENT

Comparative Detailed Operating Reports of Electric Departments of Hydro

Municipality	Welland xa	Barrie xb				
Population	7,243	6,453				
——	1917	1913	1914	1915	1916	1917
EARNINGS	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Domestic Light	5,584 56	10,071 55	11,149 49	11,087 68	11,907 10	11,232 68
Commercial Light	2,034 85	9,252 70	9,464 64	9,572 91	10,635 67	8,750 24
Power	96,449 82	3,393 45	3,712 24	4,567 76	6,918 33	7,978 72
Street Light	5,183 75	4,292 53	4,572 75	5,075 00	5,323 67	4,564 17
Miscellaneous	1,599 46	583 28	137 89	145 51	237 09	1,255 41
Total	110,852 44	27,593 51	29,037 01	30,448 86	35,021 86	33,781 22
EXPENSES						
Power Purchased	80,587 40	6,611 27	10,873 86	12,352 71	14,417 95	14,031 88
Sub-Stn. Operation	2,763 43	5,706 97	2,745 68	2,428 00	1,254 53	444 22
" " Maint'ce..	34 32	.....	.....	.....	.....	.....
Dist. System, Operation and Maintenance	1,660 16	679 16	448 87	1,008 10	182 06	811 86
Line Transformer M't'c'e. ..	438 01	.....	.....	58 50	.....	.....
Meter Maintenance	78 19	17 92	.....	151 73	1,039 54	18 96
Consumers' Premises—Exp..	.....	.....	.....	.....	.....	.....
Street Light Sys., Operation and Maintenance	601 84	402 06	108 02	675 44	506 46	661 79
Promotion of Business.....	.....	.....	.....	.....	.....	.....
Billing and Collecting.....	821 93	.....	.....	.....	.....	.....
Gen. Office, Sal. and Exp...	5,308 53	3,578 67	2,294 92	2,567 43	2,560 26	2,965 74
Undistributed Expenses....	983 75	544 58	510 67	1,174 97	726 93	633 90
Int. and Deb. Payments....	10,663 18	5,590 40	6,052 29	6,052 29	6,052 29	6,052 29
Miscellaneous Expenses....	.....	.....	.....	.....	.....	.....
Total Expenses	103,940 74	23,131 03	23,044 31	26,469 17	26,740 02	25,620 64
Surplus	6,911 70	4,462 48	5,992 70	3,979 69	8,281 84	8,160 58
Loss	.....	.....	.....	.....	.....	.....
Depreciation Charge...	5,660 00	3,350 00	3,500 00	3,500 00	2.575 00	2,928 00
Surp. Less Depr. Chg..	1,251 70	1,112 48	2,492 70	479 69	5,706 84	5,232 58

xa Hydro Department operated separately.
xb Hydro and Water Departments under one management.

"C"—Continued

Municipalities for the years ending Dec. 31st, 1913, 1914, 1915, 1916 and 1917

	Collingwood xb 6,361					Midland xb 6,258			
	1913	1914	1915	1916	1917	1913	1914	1915	1916
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
	8,775 83	7,857 86	7,094 27	8,320 44	8,734 98	6,095 11	6,941 07	6,580 45	7,145 74
	7,600 00	7,555 54	5,688 26	6,213 86	5,398 59	6,104 16	5,048 06	4,462 54	4,624 85
	896 72	5,165 39	9,527 70	23,152 41	38,989 24	5,700 22	6,484 43	10,229 52	12,262 89
	3,802 88	4,647 00	4,715 00	3,940 00	3,940 00	3,463 07	3,728 76	3,100 00	3,330 46
	106 21	.....	.....	91	20 53	.....	13 71	33 26	113 10
	21,181 64	25,225 79	27,025 23	41,627 62	57,083 34	21,362 56	22,216 03	24,405 77	27,477 04
	7,480 48	10,450 24	13,733 50	24,922 78	44,246 14	6,059 33	6,539 10	8,367 74	11,787 55
	1,952 60	2 25	.....	.....	16 51	.....	.....	.....	.....
	.....	10 51	3 97	.....	7 26	.....	.....	.....	.....
	1,374 21	749 16	530 27	493 42	1,098 69	989 11	1,284 29	1,104 58	981 34
	9 19	36 83	.....	.....	.....	57 20	420 06	122 60	35 34
	13 37	15 25	.....	98 44	104 94	.....	.....	.....	605 31
	.....	.....	.....	.....	.....	.....	.....	.....	.....
	133 20	664 19	477 36	382 60	244 10	526 53	1,020 22	1,020 86	961 47
	.....	.....	.....	.....	.....	.....	.....	.....	.....
	252 08	302 39	526 63	816 33	847 16	221 04	157 39	282 69	494 20
	2,066 94	1,916 97	1,988 80	1,988 08	3,004 88	1,435 86	1,692 75	2,088 31	1,771 67
	209 90	173 18	128 76	.....	237 74	.....	107 63	.....	175 46
	4,277 77	4,369 96	3,556 84	3,393 33	3,304 77	4,134 55	4,267 05	3,827 60	3,955 47
	.....	.....	250 00	.....	.....	.....	.....	.....	.....
	17,769 94	18,690 93	21,196 13	32,094 98	53,112 19	13,423 62	15,488 49	16,814 39	20,767 81
	3,411 70	5,534 86	5,829 10	9,532 64	3,971 15	7,938 94	6,727 54	7,591 39	6,709 23
	.....	.....	.....	.....	.....	.....	.....	.....	.....
	2,390 00	2,400 00	2,600 00	2,150 00	2,550 00	2,950 00	3,200 00	3,400 00	3,100 00
	1,021 70	4,134 86	3,229 10	7,382 64	1,421 15	4,988 94	3,527 54	4,191 39	3,609 23

xb Hydro and Water Departments under one management.

STATEMENT

Comparative Detailed Operating Reports of Electric Departments of Hydro

Municipality	Midland xb	Ingersoll xb				
Population	6,258	5,176				
——	1917	1913	1914	1915	1916	1917
EARNINGS						
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Domestic Light	9,179 72	3,595 03	5,085 82	5,480 52	6,857 94	7,465 96
Commercial Light	5,651 06	6,048 51	6,359 72	5,716 91	6,540 51	6,617 53
Power	15,300 91	15,293 44	12,818 27	16,251 18	20,380 90	21,747 80
Street Light	3,451 67	4,262 02	3,960 04	3,564 80	3,729 00	4,036 72
Miscellaneous	209 61	976 99	250 88	610 56	681 28	695 03
Total	33,792 97	30,176 00	28,474 73	31,623 97	38,189 63	40,563 04
EXPENSES						
Power Purchased	19,291 92	11,966 61	11,441 79	16,994 84	20,236 43	19,928 44
Sub-Stn. Operation	.....	828 83	907 02	852 02	1,144 36	1,035 01
" " Maint'ce	.....	.....	.....	.....	.....	.....
Dist. System, Operation and Maintenance	1,148 87	422 13	535 79	446 05	1,219 74	1,968 54
Line Transformer M't'c'e	338 29	187 39	113 54	277 77	47 31	372 36
Meter Maintenance	123 10	97 00	360 05	297 19	81 59	686 22
Consumers' Premises—Exp.	.....	.....	.....	.....	.....	.....
Street Light Sys., Operation and Maintenance	1,292 23	440 09	274 54	214 69	414 97	681 73
Promotion of Business	.....	.....	.....	.....	.....	.....
Billing and Collecting	344 83	560 15	543 73	668 26	834 79	998 88
Gen. Office, Sal. and Exp.	1,789 27	1,615 40	1,471 88	1,561 32	1,024 03	1,375 91
Undistributed Expenses	261 80	195 56	71 63	82 63	590 85	1,122 64
Int. and Deb. Payments	3,809 04	5,337 25	5,198 90	5,046 35	4,905 00	4,800 89
Miscellaneous Expenses	.....	.....	.....	.....	.....	.....
Total Expenses	28,399 35	21,650 41	20,918 87	26,441 12	30,499 07	32,970 62
Surplus	5,393 62	8,525 59	7,555 86	5,182 85	7,690 56	7,592 42
Loss	.....	.....	.....	.....	.....	.....
Depreciation Charge	3,650 00	2,862 00	3,168 00	3,200 00	2,650 00	3,130 00
Surp. Less Depr. Chg.	1,743 62	5,663 59	4,387 86	1,982 85	5,040 56	4,462 42

xb Hydro and Water Departments under one management.

"C"—Continued

Municipalities for the years ending Dec. 31st, 1913, 1914, 1915, 1916 and 1917

Walkerville xa 5,096				Waterloo xf 4,956				
1914	1915	1916	1917	1913	1914	1915	1916	1917
				p				
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
337 96	12,640 03	18,610 61	23,683 25	4,263 66	4,723 94	5,401 82	5,454 60	6,562 98
1,492 84	7,596 25	11,805 00	15,350 67	5,098 42	4,825 22	5,284 87	4,750 09	5,097 38
6,042 11	38,580 74	76,567 87	106,594 22	14,970 14	13,282 12	15,125 32	17,905 45	19,268 17
1,716 61	3,601 29	3,828 49	5,255 29	5,294 10	5,137 84	5,773 20	5,798 75	5,819 19
.....	982 28	1,653 93	1,279 24	.....	477 61	276 14	834 92	1,424 38
12,289 52	63,400 59	112,465 90	152,162 67	29,626 32	28,446 73	31,861 35	34,743 81	38,172 10
6,104 53	45,503 27	75,704 99	105,356 10	11,075 53	9,882 03	14,230 85	16,914 08	19,358 42
259 76	1,425 79	1,994 86	2,280 92	1,019 10	924 41	863 04	890 01	967 46
1 75	39 86	250 24	73 99	81 00	182 23	315 50	47 74	95 05
502 81	1,132 37	976 49	1,147 95	378 74	794 51	2,013 65	1,479 03	1,816 00
3 00	163 19	399 31	406 45	32 13	42 90	2 65	74 95	18 60
13 25	217 05	543 58	805 01	54 67	193 53	61 72	106 32	70 44
.....	.....	.....	.....	.....	.....	.....	.....	.....
10 58	749 88	1,103 25	1,057 09	1,093 25	459 21	869 98	693 68	924 49
.....	.....	.....	.....	.....	.....	.....	.....	.....
562 05	2,039 70	2,183 61	2,652 54	866 90	756 25	926 41	1,021 01	1,129 69
1,499 11	2,806 63	5,585 79	7,166 96	2,520 00	2,519 64	2,463 40	3,064 05	3,303 95
374 34	923 24	3,023 92	3,354 03	709 44	323 72	431 95	473 57	408 97
1,908 19	8,758 92	11,092 60	11,131 97	3,676 92	3,473 33	4,284 71	3,475 25	4,493 15
.....	.....	.....	.....	.....	.....	.....	.....	.....
11,239 37	63,759 90	102,858 64	135,433 01	21,507 68	19,551 76	26,463 86	29,139 69	30,586 22
1,050 15	.....	9,607 26	16,729 66	8,118 64	8,894 97	5,397 47	5,604 12	7,585 88
.....	359 31	.....	.....	.....	.....	.....	.....	.....
.....	.....	3,773 06	6,343 00	3,100 00	3,500 00	4,000 00	3,700 00	4,175 00
1,550 15	*359 31*	5,834 20	10,386 66	5,018 64	5,394 97	1,397 49	1,904 12	3,410 88

xa Hydro Department operated separately.
xf Hydro, Water and Gas Departments under one management.
"p" 13 months' operation.
Italics denote losses.

STATEMENT

Comparative Detailed Operating Reports of Electric Departments of Hydro

Municipality / Population	Goderich xb 4,655				Dundas xb 4,652	
——	1914	1915	1916	1917	1913	1914
EARNINGS						
Domestic Light	$ c. 7,197 05	$ c. 6,072 51	$ c. 7,086 32	$ c. 8,161 85	$ c. 3,045 85	$ c. 5,349 24
Commercial Light	4,196 49	5,066 76	5,253 15	5,127 44	4,193 27	4,198 64
Power	1,240 73	5,645 26	5,498 56	7,079 23	3,070 40	4,305 96
Street Light	5,525 00	5,525 00	5,162 39	5,129 84	60 10	3,050 85
Miscellaneous	.....	.....	135 00	.....	930 81	.....
Total	18,159 27	22,309 53	23,135 42	25,498 36	11,300 43	16,904 69
EXPENSES						
Power Purchased	6,315 17	7,716 02	9,136 85	9,788 62	3,474 08	4,038 10
Sub-Stn. Operation	1,806 40	1,705 39	1,461 80	1,474 93	.....	.....
" " Maint'ce.	.....	.....	.....	.....	.....	.....
Dist. System, Operation and Maintenance	167 83	312 13	525 44	587 31	154 77	840 00
Line Transformer M't'c'e.	11 25	113 65	314 94	12 98	35 80	74 75
Meter Maintenance	15 94	13 43	.....	42 61	4 40	31 18
Consumers' Premises—Exp.	.....	.....	.....	.....	.....	84 68
Street Light Sys., Operation and Maintenance	68 20	413 67	727 63	328 88	.....	285 34
Promotion of Business	.....	.....	.....	.....	.....	789 93
Billing and Collecting	343 13	405 95	494 19	623 81	689 51	937 59
Gen. Office, Sal. and Exp.	204 85	185 28	813 59	860 84	1,642 56	1,876 50
Undistributed Expenses	154 40	113 35	119 44	588 84	.....	138 32
Int. and Deb. Payments	4,182 09	4,447 27	5,302 27	4,868 44	1,970 14	4,504 12
Total Expenses	13,269 26	15,426 14	18,896 15	19,177 26	7,971 26	13,600 51
Surplus	4,890 01	6,883 39	4,239 27	6,321 10	3,329 17	3,304 18
Loss	.....	.....	.....	.....	.....	.....
Depreciation Charge	2,920 00	3,750 00	2,600 00	3,450 00	1,508 00	1,675 00
Surp. Less Depr. Chg.	1,970 01	3,133 39	1,639 27	2,871 10	1,821 17	1,629 18

xb Hydro and Water Departments under one management.

"C"—Continued

Municipalities for the years ending Dec. 31st, 1913, 1914, 1915, 1916 and 1917

Dundas xb 4,652			Preston xb 4,643				
1915	1916	1917	1913	1914	1915	1916	1917
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
6,139 97	6,925 46	8,335 64	5,477 10	6,520 39	6,615 91	7,341 15	8,956 89
4,310 96	4,714 78	4,190 60	5,366 77	5,011 15	4,488 76	4,779 76	5,733 82
5,930 54	10,915 58	10,284 87	21,017 68	21,975 26	21,698 34	22,624 37	24,569 60
3,460 35	3,547 73	3,565 50	2,594 55	2,778 48	2,830 50	3,044 92	3,116 66
.....	.....	272 70	232 47	98 53	15 00	.....	394 56
19,841 82	26,103 55	26,649 31	34,688 57	36,383 81	35,648 51	37,790 20	42,771 53
4,981 97	7,411 36	7,386 52	16,673 20	17,460 00	18,843 12	20,693 58	22,201 03
71 64	17 89	36 01	1,459 16	1,509 01	1,667 38	1,727 51	1,833 10
.....	.....	.....	49 21	28 33	30 10	211 78	55 73
1,448 70	822 50	993 58	1,238 36	2,368 26	1,656 67	1,093 91	1,659 33
91 00	125 18	140 43	280 22	139 99	149 14	197 11	215 66
61 42	36 86	427 19	79 67	86 01	56 28	145 13	324 33
28 54	.....	.....	.....	.....	.....	.....	.....
378 76	369 73	479 91	431 92	523 05	413 40	297 29	382 73
.....	.....	.....	.....	.....	.....	.....	.....
1,026 26	1,120 00	1,295 83	656 75	739 90	822 42	1,046 83	1,169 01
1,905 51	1,732 83	1,883 20	415 98	568 69	496 56	956 13	1,279 51
898 42	1,467 23	995 73	183 85	585 82	1,340 06	531 01	905 09
5,706 69	5,565 39	5,414 43	4,120 54	7,300 84	7,212 87	7,258 79	7,259 03
16,598 91	18,668 97	19,052 83	25,588 86	31,309 90	32,688 00	34,159 07	37,284 45
3,242 91	7,434 58	7,596 48	9,099 71	5,073 91	2,960 51	3,631 13	5,487 08
.....	.....	.....	.....	.....	.....	.....	.....
2,900 00	2,830 00	2,930 00	2,924 00	3,400 00	3,800 00	3,500 00	3,930 00
342 91	4,604 58	4,666 48	6,175 71	1,673 91	*839 49*	131 13	1,557 08

xb Hydro and Water Departments under one management.
Italics denote losses.

STATEMENT

Comparative Detailed Operating Reports of Electric Departments of Hydro

Municipality / Population	Paris xb 4,370				Wallaceburg xb 4,107	
——	1914	1915	1916	1917	1915	1916
EARNINGS					n	
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Domestic Light	4,766 23	5,071 54	5,877 57	6,620 91	4,079 74	5,095 45
Commercial Light	2,778 00	4,063 03	3,805 95	4,303 71	4,239 30	4,589 30
Power	1,419 90	6,328 33	8,974 66	8,828 42	87 32	5,866 32
Street Light	4,103 00	4,576 00	4,576 00	4,576 00	2,680 61	3,094 56
Miscellaneous	.....	.....	.....	.....	.....	.....
Total	13,067 22	20,937 90	23,234 18	24,329 04	11,086 97	18,645 63
EXPENSES						
Power Purchased	4,020 80	7,104 77	7,837 15	7,325 62	5,601 51	9,464 40
Sub-Stn. Operation	1,082 57	1,647 07	1,387 25	1,089 65	.....	59 43
" " Maint'ce...	.....	.....	.....	.....	.....	.....
Dist. System, Operation and Maintenance	1,299 26	1,325 58	1,299 93	1,495 26	143 88	729 31
Line Transformer M't'c'e. ..	13 45	20 00	.....	.....	.....	.....
Meter Maintenance	.....	2 05	7 60	32 43	.....	129 79
Consumers' Premises—Exp..	.....	.....	.....	.....	.....	.....
Street Light Sys., Operation and Maintenance	333 09	493 88	281 48	21 45	295 13	563 91
Promotion of Business.....	.....	.....	.....	.....	.....	.....
Billing and Collecting.....	.....	.....	83 50	168 65	.....	.....
Gen. Office, Sal. and Exp. ..	563 26	746 78	636 17	576 18	1,377 06	1,955 13
Undistributed Expenses....	115 30	100 00	348 64	391 79	.....	909 46
Int. and Deb. Payments....	5,849 94	7,966 15	6,665 00	6,665 00	3,580 84	3,701 50
Total Expenses	13,277 67	19,406 28	18,546 72	17,766 03	10,998 42	17,512 93
Surplus	.....	632 62	4,687 46	6,563 01	88 85	1,132 70
Loss	210 45	.....	.....	.....	.....	.....
Depreciation Charge...	.....	.....	2,000 00	2,500 00	.....	1,038 00
Surp. Less Depr. Chg..	*210 45*	632 62	2,687 46	4,063 01	88 85	94 70

xb Hydro and Water Departments under one management.
" n " 11 months' operation.

"C"—Continued

Municipalities for the years ending Dec. 31st, 1913, 1914, 1915, 1916 and 1917

Wallaceburg xb 4,107	Simcoe xa 4,061			Brampton xb 4,041				
1917	1915	1916	1917	1913	1914	1915	1916	1917
	1							
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
6,077 20	351 67	857 61	1,346 19	5,617 61	6,798 89	6,860 48	6,660 66	7,369 15
4,259 72	1,386 89	2,292 28	3,054 71	3,983 65	4,055 99	4,053 56	4,013 51	4,185 97
13,218 75	766 42	1,386 33	1,819 98	10,557 72	10,658 33	11,624 83	12,922 72	18,107 41
3,121 60	2,708 51	3,500 00	4,068 00	3,500 00	4,200 00	4,486 00	4,262 17	4,296 25
941 56	12 80	128 99	.....	.....	.....	62 71	269 05	431 59
27,618 83	5,226 29	8,165 21	10,288 88	23,661 98	25,713 21	27,087 58	28,128 11	34,390 37
13,455 54	2,438 62	3,531 25	4,295 37	11,084 34	11,692 39	13,259 58	14,489 32	19,630 46
77 91	.....	4 70	.....	26 11	58 58	30 95	25 68	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....
601 83	3 70	40 48	998 02	231 54	522 54	1,032 33	954 36	913 18
16 14	.....	26 37	9 71	16 00	197 15	150 45	.....	112 86
155 72	.....	12 10	22 64	.....	51 31	13 15	38 42	23 35
.....	.....	.....	.....	.....	.....	.....	.....	.....
622 14	19 81	59 45	217 30	168 79	429 60	282 72	191 62	280 97
.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	341 70	794 57	871 46	935 76	1,140 31
2,156 38	441 53	1,020 71	613 79	1,694 67	1,904 94	1,854 65	1,744 33	2,083 34
611 94	232 50	124 65	2 07	371 28	66 47	28 12	147 14	146 87
4,525 57	1,473 94	1,948 91	1,876 55	3,781 42	4,936 36	4,799 34	4,739 19	4,769 85
22,223 17	4,610 10	6,768 62	8,035 45	17,716 05	20,653 91	22,322 75	23,265 82	29,101 19
5,395 66	616 19	1,396 59	2,253 43	5,945 93	5,059 30	4,764 83	4,862 29	5,289 18
.....	.....	.....	.....	.....	.....	.....	.....	.....
1,752 00	.....	1,350 00	1,216 00	2,500 00	3,000 00	3,000 00	3,000 00	3,100 00
3,643·66	616 19	46 59	1,037 43	3,445 93	2,059 30	1,764 83	1,862 29	2,189 18

xa Hydro Department operated by itself.
xb Hydro and Water Departments under one management.
"1" 9 months' operation.

STATEMENT

Comparative Detailed Operating Reports of Electric Departments of Hydro

Municipality Population	St. Marys xb 3,958					Penetang-uishene xb
——	1913	1914	1915	1916	1917	1913
EARNINGS						
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Domestic Light	3,815 77	4,614 95	5,073 97	5,020 33	5,552 22	1,989 80
Commercial Light	4,553 73	4,733 33	4,222 53	3,161 26	3,052 62	4,511 16
Power	8,221 72	10,610 05	8,379 87	9,266 74	8,814 71	8,775 95
Street Light	3,582 00	3,441 00	3,850 00	5,390 33	5,400 00	2,042 00
Miscellaneous	.....	.....	178 00	.....	.....	.....
Total	20,173 22	23,399 33	21,704 37	22,838 66	22,819 55	17,318 91
EXPENSES						
Power Purchased	10,055 82	8,966 67	9,040 90	10,411 47	10,103 73	6,347 56
Sub-Stn. Operation	728 39	803 25	729 98	784 83	800 89	967 84
" " Maint'ce...	150 46	195 00	.....	100 67	.....	.....
Dist. System, Operation and Maintenance	556 05	400 29	582 11	475 54	211 13	301 41
Line Transformer M't'c'e...	519 39	350 34	136 96	245 73	301 42	236 11
Meter Maintenance	202 56	175 22	102 77	196 43	310 37	.....
Consumers' Premises—Exp..	.....	.....	.....	.....	.....	.....
Street Light Sys., Operation and Maintenance	554 36	423 60	502 85	640 39	510 30	144 56
Promotion of Business.....	.....	.....	.....	.....	.....	.....
Billing and Collecting.....	263 21	257 03	296 57	238 61	203 54	44 45
Gen. Office, Sal. and Exp...	1,077 38	994 13	1,143 40	964 08	1,101 73	1,278 02
Undistributed Expenses....	75 63	138 54	72 80	528 22	334 71	.....
Int. and Deb. Payments....	4,616 15	4,658 00	4,775 42	4,775 42	4,775 42	2,035 90
Total Expenses	18,799 40	17,362 07	16,507 87	19,361 39	18,653 24	11,355 85
Surplus	1,373 82	6,037 26	4,320 61	3,477 27	4,166 31	5,963 06
Loss	.....	.....	.....	.....	.....	.....
Depreciation Charge...	.....	3,340 00	3,600 00	2,900 00	3,340 00	1,820 00
Surp. Less Depr. Chg..	1,373 82	2,697 26	720 61	577 27	826 31	4,143 06

xb Hydro and Water Departments under one management.

"C"—Continued

Municipalities for the years ending Dec. 31st, 1913, 1914, 1915, 1916 and 1917

Penetanguishene xb 3,928				Tillsonburg xb 3,084				
1914	1915	1916	1917	1913	1914	1915	1916	1917
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
1,936 73	2,050 69	2,314 37	2,486 82	2,796 57	3,367 74	3,203 51	4,009 67	5,237 69
3,064 83	2,676 60	2,706 74	2,677 81	4,677 38	4,579 37	4,236 42	4,493 51	4,758 14
8,001 69	10,048 08	11,650 03	10,234 73	4,763 13	6,303 09	5,619 15	5,692 05	7,935 07
2,016 00	2,095 00	2,095 00	2,159 00	2,601 00	2,463 96	2,507 81	2,595 96	2,608 80
.....	148 35	17 70	17 54	1,163 11	863 28	667 61	436 69	1,365 53
15,019 25	17,018 72	18,783 84	17,575 90	16,001 19	17,577 44	16,234 50	17,227 88	21,905 23
7,673 95	9,935 27	11,954 10	11,281 27	6,249 35	6,999 79	7,248 93	7,761 57	10,497 64
725 24	734 23	742 17	775 74	950 05	753 91	713 91	750 71	855 77
3 25	1 66	.....	.....	.....	.....	.....	.....	.....
166 21	92 25	78 45	57 88	332 50	570 90	471 99	333 93	444 71
93 51	1 00	7 70	.....	4 89	11 55	.....	.....	.....
178 86	27 60	182 69	259 50	.....	16 47	4 40	19 68	66 20
.....	.....	.....	.....	.....	.....	.....	.....	.....
335 99	373 93	220 76	104 98	205 87	210 50	309 17	161 04	197 42
131 74	58 88	.....	.....	.....	.....	43 29	36 95	.....
133 00	227 56	196 25	222 00	907 04	923 46	1,003 63	993 63	832 54
1,305 25	1,303 05	1,260 29	1,398 78	1,064 21	997 04	1,306 50	1,654 61	1,216 56
3 00	.....	216 66	.....	1,033 61	1,000 00	.....	50 38	751 39
1,986 09	1,981 39	2,050 40	1,980 00	2,137 07	2,727 41	2,674 75	2,594 83	2,539 23
12,736 09	14,736 82	16,909 47	16,080 21	12,884 59	14,211 21	13,776 57	14,357 33	17,401 46
2,283 16	2,281 90	1,874 37	1,495 69	3,116 60	3,366 23	2,457 93	2,870 55	4,503 77
.....	.....	.....	.....	.....	.....	.....	.....	.....
1,960 00	2,000 00	1,780 00	2,000 00	1,782 75	1,830 00	1,875 00	1,600 00	1,940 00
323 16	281 90	94 37	*604 31*	1,333 85	1,536 23	582 93	1,270 55	2,563 77

xb Hydro and Water Departments under one management.
Italics denote losses.

STATEMENT

Comparative Detailed Operating Reports of Electric Departments of Hydro

Municipality	Petrolia xa		Strathroy xb			Hespeler xa
Population	3,891		2,998			2,740
——	1916	1917	1915	1916	1917	1913
EARNINGS	j					
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Domestic Light	1,598 03	3,346 54	3,380 78	3,318 45	4,355 25	2,206 75
Commercial Light	1,840 35	3,837 48	4,701 76	3,817 38	3,554 88	1,667 00
Power	356 67	6,666 29	700 49	2,927 36	4,138 79	5,044 30
Street Light	2,074 32	3,436 04	4,221 76	4,654 59	4,698 12	1,500 00
Miscellaneous	195 95	1,194 88	.....	368 88	150 41	.....
Total	6,065 32	18,481 23	13,004 79	15,086 66	16,897 45	10,418 05
EXPENSES						
Power Purchased	2,818 60	9,593 76	5,541 40	7,507 66	9,220 51	5,465 01
Sub-Stn. Operation	.....	.....	.....	.....	.....	2,101 87
" " Maint'ce	.....	.....	.....	.....	.....	.....
Dist. System, Operation and Maintenance	.....	811 64	78 62	75 14	301 37	638 83
Line Transformer M't'c'e	.....	.....	.....	.....	.....	4 17
Meter Maintenance	.....	.....	.....	.....	.....	.....
Consumers' Premises—Exp.	.....	.....	.....	.....	.....	.....
Street Light Sys., Operation and Maintenance	143 29	429 09	160 10	187 91	319 14	57 50
Promotion of Business	.....	.....	.....	.....	.....	.....
Billing and Collecting	.....	.....	.....	.....	.....	.....
Gen. Office, Sal. and Exp.	1,422 41	2,364 81	1,353 44	1,898 60	1,990 88	735 23
Undistributed Expenses	.....	62 28	.....	.....	.....	272 67
Int. and Deb. Payments	1,486 24	3,934 47	2,719 74	2,188 26	3,135 73	2,140 19
Total Expenses	5,994 49	17,196 05	9,853 30	11,857 57	14,967 63	11,415 47
Surplus	70 83	1,285 18	3,151 49	3,229 09	1,929 82	.....
Loss	.....	.....	.....	.....	.....	997 42
Depreciation Charge	.....	1,120 00	1,500 00	1,050 00	1,270 00	.....
Surp. Less Depr. Chg.	70 83	165 18	1,651 49	2,179 09	659 82	*997 42*

xa Hydro Department operated separately.
xb Hydro and Water Departments under one management.
Italics denote losses.
"j" 7 months' operation.

"C"—Continued

Municipalities for the years ending Dec. 31st, 1913, 1914, 1915, 1916 and 1917

xa Hespeler 2,740				xb Prescott 2,740			
1914	1915	1916	1917	1914	1915	1916	1917
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
2,635 41	2,787 48	3,011 73	3,679 79	7,472 75	4,058 14	4,186 96	4,865 40
1,934 75	2,334 15	2,012 28	2,389 80	996 00	3,033 62	3,611 95	3,999 55
6,116 27	9,017 58	11,177 71	10,166 33	1,099 27	3,431 45	4,141 90	5,010 65
1,478 00	1,536 00	1,831 80	1,990 16	2,500 00	2,500 00	2,500 00	2,500 00
.....	.....	.....	.....	9 00	.....	117 39	238 68
12,164 43	15,675 21	18,033 52	18,226 08	12,077 02	13,023 21	14,558 20	16,614 28
4,753 26	6,663 89	9,755 25	8,541 47	5,047 30	4,552 99	4,603 77	4,934 78
614 43	413 06	839 98	888 53	3,293 49	1,147 65	2,317 58	2,964 32
.....	.....	.....	.....	361 49	805 14	47 63	188 08
565 16	431 37	626 62	442 35	767 49	929 36	1,247 01	1,107 30
54 05	52 76	.....	43 27	.....	34 00	.....	.....
.....	.....	147 22	.....	116 10	146 70	27 80	72 57
.....	.....	.....	.....	.....	.....	.....	.....
111 92	139 02	165 66	54 82	119 00	210 22	520 60	646 59
.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	37 82	81 94	22 17	23 70
1,207 23	481 99	1,367 10	1,155 47	1,165 23	1,503 78	1,538 89	1,758 04
112 50	112 50	137 50	112 50	169 62	260 23	166 90	416 02
3,144 33	3,144 33	3,144 34	3,089 65	1,722 31	2,233 12	1,983 39	1,983 39
10,562 88	12,438 82	16,183 67	14,328 06	12,799 85	11,905 13	12,475 74	14,094 79
1,601 55	3,236 29	1,849 85	3,898 02	.....	1,118 08	2,082 46	2,519 49
.....	.....	.....	.....	700 06	.....	.....	.....
1,350 00	1,400 00	1,075 00	1,220 00	1,950 00	2,000 00	1,880 00	2,190 00
251 55	1,836 29	774 85	2,678 02	*2,650 06*	*881 92*	202 46	329 49

xa Hydro Department operated separately.
xb Hydro and Water Departments under one management.
Italics denote losses.

STATEMENT

Comparative Detailed Operating Reports of Electric Departments of Hydro

Municipality	Orangeville xa		Listowel xb		Ridgetown xa		Hunts-ville xb
Population	2,493		2,326		2,329		
——	1916	1917	1916	1917	1916	1917	1917
EARNINGS	g		z				
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Domestic Light	613 08	1,641 42	7,696 19	2,500 80	2,173 64	2,551 69	3,597 74
Commercial Light	722 87	1,903 38	*	3,168 19	2,838 32	2,720 19	1,265 03
Power	866 11	2,902 60	605 03	3,385 58	740 86	2,245 85	13,569 75
Street Light	760 00	1,648 95	2,163 16	3,018 80	2,853 00	2,969 02	1,860 00
Miscellaneous	127 27	295 82	.....	.....	390 90	361 24	146 44
Total	3,089 33	8,392 17	10,464 38	12,073 37	8,999 72	10,847 99	20,438 96
EXPENSES							
Power Purchased	1,379 12	3,326 62	2,010 78	5,653 23	3,950 44	4,337 24	14,639 98
Sub-Stn. Operation	.....	.....	2,121 60	.....	.....	.....	.....
" " Maint'ce	.....	.....	.....	.....	.....	.....	.....
Dist. System, Operation and Maintenance	39 40	1,176 70	351 71	187 55	215 56	114 37	1,141 53
Line Transformer M't'c'e.	.....	.....	.....	.....	.....	.....	.....
Meter Maintenance	.....	.....	.....	.....	.....	.....	.....
Consumers' Premises—Exp.	.....	.....	.....	.....	.....	.....	.....
Street Light Sys., Operation and Maintenance	64 72	271 46	73 29	508 69	23 27	98 29	27 86
Promotion of Business	.....	.....	.....	.....	.....	.....	.....
Billing and Collecting	.....	.....	.....	.....	.....	.....	.....
Gen. Office, Sal. and Exp.	750 53	379 05	2,569 12	2,100 25	1,114 21	1,286 40	1,407 25
Undistributed Expenses	.....	.....	.....	471 38	.....	.....	.....
Int. and Deb. Payments	610 88	2,067 96	2,928 48	2,978 82	1,840 86	1,777 75	1,647 41
Total Expenses	2,844 65	7,221 79	10,054 98	11,899 93	7,144 34	7,614 15	18,864 03
Surplus	244 68	1,170 38	409 40	173 44	1,855 38	3,233 84	1,574 93
Loss	.....	.....	.....	.....	.....	.....	.....
Depreciation Charge	.....	1,000 00	.....	960 00	425 00	560 00	775 00
Surp. Less Depr. Chg.	244 68	170 38	409 40	*786 56*	1,430 38	2,673 84	799 93

xa Hydro Department operated by itself.
xb Hydro and Water Departments under one management.
"g" 5 months' operation.
"z" 6 months' Hydro; 6 months' steam.
Italics denote losses.
* Domestic and Commercial combined.

"C"—Continued

Municipalities for the years ending Dec. 31st, 1913, 1914, 1915, 1916 and 1917

	Elmira xb 2,270				Clinton xb 2,177				Weston xb 2,156
	1914	1915	1916	1917	1914	1915	1916	1917	1913
	p								
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
	1,968 41	2,059 11	2,211 16	2,383 62	2,023 70	2,930 57	3,161 29	3,220 73	4,117 20
	2,020 81	1,674 44	1,665 69	1,854 61	2,028 08	3,068 63	3,064 37	2,654 30	1,475 74
	1,876 49	2,801 33	2,635 22	3,613 47	1,255 33	2,108 24	2,498 64	2,348 15	6,170 36
	1,680 00	1,680 00	1,740 00	1,848 00	1,105 66	1,630 40	1,650 00	1,661 44	2,052 00
	.....	3 75	18 24	9 27	.....	118 31	273 61	99 59	24 88
	7,545 71	8,218 63	8,270 31	9,708 97	6,412 77	9,856 15	10,647 91	9,984 21	13,840 18
	3,077 56	3,361 63	3,494 69	4,525 15	2,291 20	3,835 94	4,190 07	4,089 75	5,159 49
	.....	.....	.....	.....	911 74	911 51	.....	.....	.....
	.....	.....	.....	.....	.....	.....	.....	.....	.....
	.....	.....	.....	.....	80 99	146 80	298 77	286 42	791 77
	.....	.....	.....	.....	.....	.....	.....	.....	.....
	.....	.....	.....	.....	.....	.....	.....	.....	.....
	.....	.....	.....	.....	.....	.....	.....	.....	.....
	102 55	83 64	148 96	15 80	145 74	298 61	106 26	29 12	574 25
	.....	.....	.....	.....	.....	.....	.....	.....	.....
	.....	.....	.....	.....	.....	.....	.....	.....	.....
	1,170 47	1,090 84	1,122 04	1,168 15	1,182 42	1,569 57	1,323 31	1,515 76	927 35
	31 17	.....	.....	.....	32 29	.....	.....	.....	79 50
	1,425 22	1,356 67	1,377 58	1,352 10	1,838 56	2,643 15	3,089 21	3,002 09	1,588 48
	5,806 97	5,892 78	6,143 27	7,061 20	6,483 14	9,405 58	9,007 62	8,923 14	9,120 84
	1,738 74	2,325 85	2,127 04	2,647 77	.....	450 57	1,640 29	1,061 07	4,719 34
	.....	.....	.....	.....	70 37	.....	.....	.....	.....
	650 00	750 00	620 00	870 00	.....	380 20	1,200 00	920 00	1,390 00
	1,088 74	1,575 85	1,507 04	1,777 77	*70 37*	70 37	440 29	141 07	3,329 34

xb Hydro and Water Departments under one management.
"p" 13 months' operation.
Italics denote losses.

STATEMENT

Comparative Detailed Operating Reports of Electric Departments of Hydro

Municipality / Population	Weston xb 2,156				Milton xa 2,072		
——	1914	1915	1916	1917	1913	1914	1915
EARNINGS							
Domestic Light	3,741 84	4,407 36	5,477 65	5,942 00	1,149 28	1,961 22	1,981 80
Commercial Light	1,599 97	1,305 90	1,407 31	1,467 63	1,212 26	2,226 80	1,900 98
Power	4,958 59	4,798 33	4,652 71	16,420 90	6,462 38	11,325 61	5,364 29
Street Light	3,067 50	2,684 67	3,692 00	3,498 00	900 00	1,350 00	1,575 00
Miscellaneous	.....	31 79	17 55	169 01	143 18	455 62	.....
Total	13,367 90	14,228 05	15,347 22	27,497 54	9,867 10	17,319 25	10,822 07
EXPENSES							
Power Purchased	5,783 87	5,536 71	6,121 26	18,504 44	4,902 34	7,696 45	6,511 50
Sub-Stn. Operation	.....	.....	.....	.....	.....	.....	.....
" " Maint'ce	.....	.....	.....	.....	.....	.....	.....
Dist. System, Operation and Maintenance	662 71	1,181 11	1,001 17	1,713 71	167 82	609 66	513 70
Line Transformer M't'c'e.	.....	.....	.....	.....	.....	.....	.....
Meter Maintenance	.....	.....	.....	.....	.....	.....	.....
Consumers' Premises—Exp.	.....	.....	.....	.....	.....	.....	.....
Street Light Sys., Operation and Maintenance	451 99	419 20	189 66	201 14	.....	86 16	169 82
Promotion of Business	.....	.....	.....	.....	.....	.....	.....
Billing and Collecting	.....	.....	.....	.....	.....	.....	.....
Gen. Office, Sal. and Exp.	1,668 62	1,264 78	1,428 12	1,301 53	42 27	572 05	819 70
Undistributed Expenses	76 17	.....	.....	.....	.....	.....	.....
Int. and Deb. Payments	1,588 42	2,310 20	2,096 09	2,196 53	1,582 93	2,277 04	2,270 34
Total Expenses	10,231 78	10,712 00	10,836 30	23,917 35	6,695 36	11,241 36	10,285 06
Surplus	3,136 12	3,516 05	4,510 92	3,580 19	3,171 74	6,077 89	537 01
Loss	.....	.....	.....	.....	.....	.....	.....
Depreciation Charge	1,450 00	1,520 00	1,600 00	1,930 00	900 00	1,250 00	1,090 00
Surp. Less Depr. Chg.	1,686 12	1,996 05	2,910 92	1,650 19	2,271 74	4,827 89	*552 99*

xa Hydro Department operated separately.
xb Hydro and Water Departments under one management.
Italics denote losses.

"C"—Continued

Municipalities for the years ending Dec. 31st, 1913, 1914, 1915, 1916 and 1917

Milton xa 2,072		Mimico xa 1,976					Chesley 1,975 xa		Seaforth xh 1,964
1916	1917	1913	1914	1915	1916	1917	1916	1917	1913
			†	†	†	†	g		
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
2,219 28	2,528 88	2,021 06	5,085 16	5,748 44	7,011 08	7,400 73	1,881 23	2,122 78	2,124 18
1,892 21	1,863 60	*	*	346 49	506 44	883 24	*	1,971 03	2,876 47
10,428 79	7,968 76	795 49	963 64	1,042 11	1,449 14	2,750 59	135 61	1,725 38	7,509 99
2,013 20	2,040 77	987 00	1,049 34	2,015 66	2,496 75	2,291 12	521 65	1,285 06	1,815 81
262 42	590 62	.....	.....	.....	52 23	154 37	49 89	96 49	61 63
16,815 90	14,992 63	3,803 55	7,098 14	9,152 70	11,515 64	13,480 05	2,588 38	7,200 74	14,388 08
9,332 39	8,892 32	1,740 66	2,801 90	3,342 50	4,217 02	4,880 07	1,332 68	3,129 02	7,931 55
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
731 07	1,659 16	144 79	53 29	167 16	698 69	1,603 79	25 98	266 01	1,573 93
417 42	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
50 65	187 56	23 89	88 85	148 80	253 82	388 61	23 38	69 08	317 37
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
889 31	760 52	265 61	674 73	892 39	1,098 29	1,404 42	130 59	377 29	368 67
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
2,178 67	2,212 11	845 02	1,561 45	2,300 32	2,580 10	2,711 55	482 05	2,130 83	1,653 65
13,599 51	13,711 67	3,019 97	5,180 22	6,851 17	8,847 92	10,988 44	1,994 68	5,972 23	11 845 17
3,216 39	1,280 96	783 58	1,917 92	2,301 53	2,667 72	2,491 61	593 70	1,228 51	2,542 91
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
900 00	1,037 00	740 00	920 00	1,200 00	1,000 00	1,400 00	.....	715 00	1,300 00
2,316 39	243 96	43 58	997 92	1,101 53	1,667 72	1,091 61	593 70	513 51	1,242 91

xa Hydro Department operated separately.
xh Hydro Department operated by municipal officials.
"g" 5 months' operation.
† Domestic Revenue includes Rural.
* Domestic and Commercial combined.

STATEMENT

Comparative Detailed Operating Reports of Electric Departments of Hydro

Municipality / Population	Seaforth xh 1,964				Mount Forest xb 1,941		George-town xa 1,905
——	1914	1915	1916	1917	1916	1917	1913
EARNINGS							f
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Domestic Light	2,467 36	2,593 70	3,045 65	3,437 49	1,967 03	2,171 91	661 49
Commercial Light	2,581 30	2,724 84	2,941 03	2,902 34	2,420 75	2,556 41	842 87
Power	7,707 01	7,685 52	9,684 11	15,125 30	1,739 79	2,533 40	234 32
Street Light	1,869 96	1,869 96	1,869 96	1,869 96	1,963 00	1,710 00	541 67
Miscellaneous	110 14	143 53	88 39	330 02	523 01	140 51	.....
Total	14,735 77	15,017 55	17,629 14	23,665 11	8,613 58	9,112 23	2,280 35
EXPENSES							
Power Purchased	8,646 18	9,305 22	11,625 46	15,669 77	3,544 42	3,716 67	759 00
Sub-Stn. Operation	.....	.....	.....	.....	.....	.....	.....
" " Maint'ce.	.....	.....	.....	.....	.....	.....	.....
Dist. System, Operation and Maintenance	1,078 00	891 49	1,170 86	1,025 86	969 92	696 73	12 85
Line Transformer M't'c'e	.....	.....	.....	.....	.....	.....	.....
Meter Maintenance	.....	.....	.....	.....	.....	.....	.....
Consumers' Premises—Exp.	.....	.....	.....	.....	.....	.....	.....
Street Light Sys., Operation and Maintenance	638 57	314 55	228 17	255 82	74 92	101 02	201 06
Promotion of Business	.....	.....	.....	.....	.....	.....	.....
Billing and Collecting	.....	.....	.....	.....	.....	.....	.....
Gen. Office, Sal. and Exp.	529 05	548 30	559 54	955 07	315 09	241 36	.....
Undistributed Expenses	.....	.....	.....	.....	.....	.....	.....
Int. and Deb. Payments	1,704 25	1,662 37	1,695 75	1,691 51	1,622 33	1,816 16	.....
Total Expenses	12,596 05	12,721 93	15,279 78	19,598 03	6,526 68	6,571 94	972 91
Surplus	2,139 72	2,295 62	2,349 36	4,067 08	2,086 90	2,540 29	1,307 44
Loss	.....	.....	.....	.....	.....	.....	.....
Depreciation Charge	1,400 00	1,450 00	1,225 00	1,425 00	615 00	895 00	300 00
Surp. Less Depr. Chg.	739 72	845 62	1,124 36	2,642 08	1,471 90	1,645 29	1,007 44

xa Hydro Department operated separately.
xb Hydro and Water Departments under one management.
xh Hydro Department operated by municipal officials.
"f" 4 months' operation.

" C "—Continued

Municipalities for the years ending Dec. 31st, 1913, 1914, 1915, 1916 and 1917

Georgetown xa 1,905				Fergus xa 1,776			Tilbury xa 1,740		
1914	1915	1916	1917	1915	1916	1917	1915	1916	1917
				p			k		
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
3,069 02	2,999 83	3,174 63	3,370 42	1,314 03	1,621 27	1,822 14	979 57	1,507 37	1,555 59
2,362 33	2,276 41	2,101 00	2,291 61	2,367 91	2,111 16	2,028 47	1,476 53	2,071 77	2,038 56
2,976 61	8,734 01	10,726 24	12,714 94	882 24	2,819 21	1,959 57	.....	149 60	423 28
1,843 67	1,834 03	1,724 17	1,751 98	1,744 75	1,575 00	1,583 34	715 00	938 73	915 00
.....	130 53	369 40	299 88	99 65	91 31	248 81	19 39	12 85	2 70
10,251 63	15,974 81	18,095 44	20,428 83	6,408 58	8,217 95	7,642 33	3,190 49	4,680 32	4,935 13
4,183 72	8,893 20	9,790 20	12,063 90	2,598 37	3,382 69	3,388 33	1,601 33	2,267 40	2,341 98
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
192 11	137 03	290 19	817 15	23 77	123 40	506 97	.....	12 09	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
128 09	192 12	259 17	165 89	97 28	132 70	98 76	10 60	23 10	33 11
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
895 46	955 08	1,102 70	959 58	1,208 84	681 81	856 73	643 64	1,054 03	1,037 32
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1,466 55	1,929 67	1,963 05	2,088 33	967 76	1,148 74	1,132 74	668 57	864 00	1,075 29
6,865 93	12,107 10	13,405 31	16,094 85	4,896 01	5,469 34	5,983 53	2,924 14	4,220 62	4,487 70
3,385 70	3,867 71	4,690 13	4,333 98	1,512 57	2,748 61	1,658 80	266 35	459 70	447 43
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
850 00	1,280 00	1,210 00	1,580 00	650 00	500 00	650 00	.....	275 00	290 00
2,535 70	2,587 71	3,480 13	2,753 98	862 57	2,248 61	1,008 80	266 35	184 70	157 43

xa Hydro Department operated separately.
"k" 8 months' operation.

STATEMENT

Comparative Detailed Operating Reports of Electric Departments of Hydro

Municipality	Palmerston		Acton xa				
Population	1,843 xb		1,735				
——	1916	1917	1913	1914	1915	1916	1917
EARNINGS	y						
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Domestic Light	6,102 25	2,506 76	1,236 50	1,463 72	1,931 11	1,942 11	2,016 13
Commercial Light	*	2,780 86	1,567 48	1,496 18	1,725 73	1,592 62	1,600 56
Power	282 57	1,225 68	318 77	836 13	1,019 27	1,565 53	4,116 69
Street Light	1,542 33	1,582 50	1,000 00	1,563 00	1,555 00	1,497 50	1,300 54
Miscellaneous	.....	.....	286 72	83 60	188 76	136 31	.....
Total	7,927 15	8,095 80	4,409 47	5,442 63	6,419 87	6,734 07	9,033 92
EXPENSES							
Power Purchased	1,480 74	3,422 38	1,801 50	2,344 50	2,495 70	2,500 20	5,432 70
Sub-Stn. Operation	1,133 63	.....	.....	.....	.....	.....	.....
" " Maint'ce	.....	.....	.....	.....	.....	.....	.....
Dist. System, Operation and Maintenance	66 02	194 25	371 97	35 42	78 52	63 88	1,172 87
Line Transformer M't'c'e	.....	.....	.....	.....	.....	.....	.....
Meter Maintenance	.....	.....	.....	.....	.....	.....	.....
Consumers' Premises—Exp.	.....	.....	.....	.....	.....	.....	.....
Street Light Sys., Operation and Maintenance	44 00	104 56	7 20	147 12	144 16	112 23	102 35
Promotion of Business	.....	.....	.....	.....	.....	.....	.....
Billing and Collecting	.....	.....	.....	.....	.....	.....	.....
Gen. Office, Sal. and Exp.	1,044 29	896 47	841 70	943 77	667 70	999 19	352 01
Undistributed Expenses	.....	.....	.....	.....	.....	.....	.....
Int. and Deb. Payments	1,840 00	1,841 43	442 00	1,124 06	1,124 06	1,101 41	1,096 40
Total Expenses	5,608 68	6,459 09	3,584 37	4,594 87	4,510 14	4,776 91	8,156 33
Surplus	2,318 47	1,636 71	825 10	847 76	1,909 73	1,957 16	877 59
Loss	.....	.....	.....	.....	.....	.....	.....
Depreciation Charge	295 00	585 00	500 00	500 00	500 00	500 00	550 00
Surp. Less Depr. Chg.	2,023 47	1,051 71	325 10	347 76	1,409 73	1,457 16	327 59

xa Hydro Department operated separately.
xb Hydro and Water Departments under one management.
"y" 5 months' Hydro; 7 months' steam.

"C"—Continued

Municipalities for the years ending Dec, 31st, 1913, 1914, 1915, 1916 and 1917

Graven-hurst xb 1,702		Mitchell xb 1,687					Durham 1,600 xb	
1916	1917	1913	1914	1915	1916	1917	1916	1917
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
3,553 06	2,350 79	2,424 59	2,470 29	2,379 58	2,311 80	2,572 51	1,518 72	1,619 86
4,575 10	4,412 55	2,813 92	2,712 55	2,684 01	2,677 35	2,774 59	1,057 33	954 19
2,469 19	4,892 05	6,160 53	3,944 91	2,333 08	3,231 56	4,169 05	.....	30 00
1,172 49	1,310 80	1,675 00	1,950 00	2,100 00	2,100 00	2,100 00	1,068 00	1,080 00
.....	.....	385 50	443 90	63 20	9 74	355 65	.....	.....
11,769 84	12,966 19	13,459 54	11,521 65	9,559 87	10,330 45	11,971 80	3,644 05	3,684 05
2,470 59	3,274 26	6,858 86	4,882 39	4,424 38	4,966 61	5,581 43	2,005 89	1,972 79
.....	.....	12 35	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....
1,252 54	1,205 27	81 25	66 52	486 96	201 04	748 16	254 48	278 78
.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....
50 72	293 56	44 64	34 12	26 10	38 40	119 92	43 50	30 63
.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....
2,156 21	2,242 60	1,223 80	1,315 10	1,258 61	2,004 69	1,081 50	166 31	192 32
.....	.....	100 00	.....	.....	.....	.....	.....	.....
3,483 41	3,814 22	2,224 07	2,224 06	2,124 46	1,808 33	1,831 00	1,277 28	1,804 40
9,413 47	10,829 91	10,544 97	8,522 19	8,320 51	9,019 07	9,362 01	3,747 46	4,278 92
2,356 37	2,136 28	2,914 57	2,999 46	1,239 36	1,311 38	2,609 79	.....	.....
.....	.....	.....	.....	.....	.....	.....	103 41	594 87
1,650 00	1,727 00	1,150 00	1,200 00	1,000 00	1,000 00	1,250 00	.....	570 00
706 37	409 28	1,764 57	1,799 46	239 36	311 38	1,359 79	*103 41*	*1,164 87*

xb Hydro and Water Departments under one management.
Italics denote losses.

STATEMENT

Comparative Detailed Operating Reports of Electric Departments of Hydro

Municipality	Exeter		New Hamburg				
	xh		xh				
Population	1,572		1,543				
——	1916	1917	1913	1914	1915	1916	1917
	h						
EARNINGS							
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Domestic Light	727 88	2,030 27	1,589 21	1,779 90	1,888 04	1,816 44	2,052 95
Commercial Light	677 73	1,784 53	1,890 72	1,403 56	1,273 38	1,211 25	1,481 03
Power	361 73	2,363 60	5,792 20	5,209 51	2,825 57	1,646 90	4,299 65
Street Light	1,473 88	2,721 00	1,827 00	1,827 00	1,827 00	1,827 00	1,827 00
Miscellaneous	50 78	566 81	325 44	.....	351 77	400 90	56 70
Total	3,292 00	9,466 21	11,424 57	10,219 97	8,165 76	6,902 49	9,717 33
EXPENSES							
Power Purchased	1,477 19	4,259 03	5,206 00	4,770 26	3,144 80	2,934 14	5,087 98
Sub-Stn. Operation	.....	.....	.....	.....	.....	.....	.....
" " Maint'ce.	.....	.....	.....	.....	.....	.....	.....
Dist. System, Operation and Maintenance	23 04	69 64	323 40	380 19	469 01	480 61	816 07
Line Transformer M't'c'e.	.....	.....	.....	.....	.....	.....	.....
Meter Maintenance	.....	.....	.....	.....	.....	.....	.....
Consumers' Premises—Exp.	.....	.....	.....	.....	.....	.....	.....
Street Light Sys., Operation and Maintenance	21 65	209 98	.....	.....	177 00	101 98	215 91
Promotion of Business	.....	.....	.....	.....	.....	.....	.....
Billing and Collecting	.....	.....	.....	.....	.....	.....	.....
Gen. Office, Sal. and Exp.	567 86	721 11	1,194 68	995 47	1,055 70	1,056 52	706 22
Undistributed Expenses	.....	.....	.....	107 21	.....	.....	.....
Int. and Deb. Payments	665 47	1,300 65	1,170 92	1,172 91	1,303 57	1,170 92	1,170 91
Total Expenses	2,755 21	6,560 41	7,895 00	7,426 04	6,150 08	5,744 17	7,997 09
Surplus	536 79	2,905 80	3,529 57	2,793 93	2,015 68	1,158 32	1,720 24
Loss	.....	.....	.....	.....	.....	.....	.....
Depreciation Charge	.....	615 00	900 00	900 00	900 00	830 00	900 00
Surp. Less Depr. Chg.	536 79	2,290 80	2,629 57	1,893 93	1,115 68	328 32	820 24

xh Hydro Department operated by municipal officials.
"h" 6 months' operation.

"C"—Continued

Municipalities for the years ending Dec. 31st, 1913, 1914, 1915, 1916 and 1917

Dresden xh 1,521			Forest xa 1,495	Victoria Harbor xh 1,477			Blenheim xh 1,424		Watford xa
1915	1916	1917	1917	1915	1916	1917	1916	1917	1917
k				e					
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
1,093 68	1,995 51	2,158 62	3,545 66	105 79	642 29	666 04	2,231 76	2,256 70	397 56
1,223 25	1,986 21	1,983 96	1,358 84	117 85	1,171 37	1,130 48	2,356 37	2,113 67	411 89
.....	.....	102 94	174 96	.....	.....	.....	.....	47 40	362 90
1,100 00	1,650 00	1,651 25	2,670 00	141 00	720 00	540 00	2,536 00	2,536 00	453 00
153 51	286 29	128 97	517 52	.....	.....	.....	31 78	.....	.....
3,570 44	5,918 01	6,025 74	8,266 98	364 64	2,533 66	2,336 52	7,155 91	6,953 77	1,625 35
1,917 34	2,685 88	2,807 52	2,722 70	172 82	954 00	974 72	3,326 29	3,261 46	587 06
.....	.....	.....	520 24	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
25 82	40 62	30 10	448 23	17 89	51 45	66 83	76 54	270 39	7 50
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
11 24	124 30	111 93	85 82	.....	55 40	36 00	165 98	295 92	6 80
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
729 57	1,259 82	1,252 04	727 51	30 00	157 26	174 88	684 53	654 36	58 84
.....	.....	.....	.....	.....	.....	.....	18 48	.....	.....
754 98	1,492 65	1,442 28	2,849 03	.....	497 96	543 95	897 08	1,116 02	267 69
3,438 95	5,603 27	5,643 87	7,353 53	220 71	1,716 07	1,796 36	5,168 90	5,598 15	927 89
131 49	314 74	381 87	913 45	143 93	817 59	540 16	1,987 01	1,355 62	697 46
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	314 74	315 00	.....	.....	190 00	250 00	440 00	550 00	.....
131 49	000 00	66 87	913 45	143 93	627 59	290 16	1,547 01	805 62	697 46

xa Hydro Department operated by itself.
xh Hydro Department operated by municipal officials.
"e" 3 months' operation.
"k" 8 months' operation.

STATEMENT

Comparative Detailed Operating Reports of Electric Departments of Hydro

Municipality · Population	Harriston 1,404 xb		Port Dalhousie xh 1,318				
——	1916	1917	1913	1914	1915	1916	1917
EARNINGS	y						
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Domestic Light	2,967 86	1,556 49	3,742 54	3,656 01	3,608 70	2,868 05	3,249 37
Commercial Light	*	1,935 38	*	*	*	782 99	881 01
Power	366 79	2,686 93	347 28	429 54	252 12	339 12	321 67
Street Light	1,253 25	1,006 50	1,246 67	880 00	968 00	850 00	850 00
Miscellaneous	.....	.....	.....	.....	.....	.....	.....
Total	4,587 90	7,185 30	5,336 49	4,965 55	4,828 82	4,840 16	5,302 05
EXPENSES							
Power Purchased	1,191 50	3,384 96	2,393 00	2,407 20	2,415 28	1,911 14	1,958 83
Sub-Stn. Operation	1,026 97	.....	.....	.....	.....	.....	.....
" " Maint'ce.	.....	.....	.....	.....	.....	.....	.....
Dist. System, Operation and Maintenance	254 98	374 95	253 81	421 83	225 52	600 76	1,416 47
Line Transformer M't'c'e.	.....	.....	.....	.....	.....	.....	.....
Meter Maintenance	.....	.....	.....	.....	.....	.....	.....
Consumers' Premises—Exp.	.....	.....	.....	.....	.....	.....	.....
Street Light Sys., Operation and Maintenance	77 28	32 40	8 74	65 28	25 75	54 90	127 83
Promotion of Business	.....	.....	.....	.....	.....	.....	.....
Billing and Collecting	.....	.....	.....	.....	.....	.....	.....
Gen. Office, Sal. and Exp.	205 45	390 76	302 30	712 50	1,014 54	1,092 59	357 26
Undistributed Expenses	522 46	36 07	112 98	218 83	.....	.....	.....
Int. and Deb. Payments	992 61	1,071 32	814 89	725 89	629 04	1,264 89	1,240 84
Total Expenses	4,271 25	5,290 46	4,785 72	4,551 53	4,310 13	4,924 28	5,101 23
Surplus	316 65	1,894 84	550 77	414 02	518 69	.....	200 82
Loss	.....	.....	.....	.....	.....	84 12	.....
Depreciation Charge	345 00	465 00	450 00	414 02	415 00	410 00	460 00
Surp. Less Depr. Chg.	*28 35*	1,429 84	100 77	.....	103 69	*494 12*	*259 18*

xb Hydro and Water Departments under one management.
xh Hydro Department operated by municipal officials.
"y" 5 months' Hydro; 7 months' Steam.
Italics denote losses.

"C"—Continued

Municipalities for the years ending Dec. 31st, 1913, 1914, 1915, 1916 and 1917

Caledonia xh 1,217					Norwich xb 1,189				
1913	1914	1915	1916	1917	1913	1914	1915	1916	1917
							†	†	††
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
404 60	880 54	265 62	263 39	283 63	1,926 78	2,168 13	2,529 91	2,319 58	8,132 02
*	*	950 38	777 38	786 20	1,162 98	995 16	1,075 79	1,168 34	1,198 97
470 34	188 54	138 42	519 82	777 85	1,978 55	1,893 72	2,169 31	2,642 97	4,116 38
584 00	780 00	808 00	760 00	958 00	1,285 50	1,197 00	1,126 00	1,183 56	1,597 50
.....	.....	.....	.....	.....	46 71	746 92	2,504 61	3,730 22	469 49
1,458 94	1,849 08	2,162 42	2,320 59	2,805 68	6,400 52	7,000 93	9,405 62	11,044 67	15,514 36
766 70	669 00	793 00	917 00	1,101 40	3,176 24	2,849 30	2,954 63	6,039 14	7,486 64
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
23 05	92 95	53 58	91 65	76 55	178 90	464 80	809 58	883 68	1,507 04
.....	.....	.....	.....	.....	.....	13 48	7 05	116 70	.....
.....	.....	.....	.....	.....	.....	37 11	1 32	1 35	92 81
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	35 80	22 28	22 65	44 52	79 51	95 40	75 95	88 14	265 01
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
48 28	66 82	92 76	82 85	80 40	838 27	534 15	595 76	574 16	747 96
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
134 47	122 86	361 72	361 72	361 72	886 40	960 58	1,985 15	2,452 31	3,630 63
972 50	987 43	1,343 34	1,475 87	1,664 59	5,159 32	4,954 82	6,429 44	10,155 48	13,730 09
486 44	861 65	819 08	844 72	1,141 09	1,241 20	2,046 11	2,976 18	889 19	1,784 27
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
250 00	260 00	300 00	260 00	320 00	500 00	530 00	1,195 00	1,370 00	1,855 00
236 44	601 65	519 08	584 72	821 09	741 20	1,516 11	1,781 18	*480 81*	*70 73*

xb Hydro and Water Departments under one management.
xh Hydro Department operated by municipal officials.
† Miscellaneous includes Rural Revenue.
†† Domestic and Rural combined.
* Domestic and Commercial combined.
Italics denote losses.

STATEMENT

Comparative Detailed Operating Reports of Electric Departments of Hydro

Municipality	New Toronto xa				Waterford xh		
Population	1,186				1,133		
——	1914	1915	1916	1917	1915	1916	1917
EARNINGS	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Domestic Light	653 56	1,416 10	1,571 03	2,451 49	685 22	1,112 28	1,369 35
Commercial Light	*	*	143 32	566 42	546 08	796 50	807 28
Power		2,140 36	9,744 31	30,726 27		1,007 74	4,030 85
Street Light	600 00	783 00	838 00	862 00	892 50	1,174 82	1,355 70
Miscellaneous							110 17
Total	1,253 56	4,339 46	12,296 66	34,606 18	2,123 80	4,091 34	7,673 35
EXPENSES							
Power Purchased	233 30	1,351 92	6,547 34	23,492 71	931 11	2,063 38	3,696 21
Sub-Stn. Operation							
" " Maint'ce.							
Dist. System, Operation and Maintenance	50 73	137 80	228 19	2,121 67	26 30	212 03	254 94
Line Transformer M't'c'e.							
Meter Maintenance							
Consumers' Premises—Exp.							
Street Light Sys., Operation and Maintenance	137 85	55 00	83 02	350 70	23 16	90 00	180 02
Promotion of Business							
Billing and Collecting							
Gen. Office, Sal. and Exp.	318 01	629 49	678 32	1,007 83	78 41	184 20	173 45
Undistributed Expenses							
Int. and Deb. Payments	178 44	654 10	922 31	1,310 85	978 56	1,366 37	1,467 39
Total Expenses	918 32	2,828 31	8,459 18	28,283 76	2,037 54	3,915 98	5,772 01
Surplus	335 23	1,511 15	3,837 48	6,322 42	86 26	175 36	1,901 34
Loss							
Depreciation Charge	200 00	550 00	450 00	1,000 00			
Surp. Less Depr. Chg.	135 23	961 15	3,387 48	5,322 42	86 26	175 36	1,901 34

xa Hydro Department operated separately.
xh Hydro Department operated by municipal officials.

"C"—Continued

Municipalities for the years ending Dec. 31st, 1913, 1914, 1915, 1916 and 1917

Arthur xh 1,040	Shelburne xa 1,115		Elora xh 1,115				Hagersville xa 1,105		
1917	1916	1917	1914	1915	1916	1917	1913	1914	1915
	g		c				e		
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
854 24	538 29	1,625 28	101 98	1,044 49	1,253 03	1,400 12	81 42	1,222 33	1,172 85
922 38	494 38	1,362 06	167 25	1,820 07	1,828 25	1,937 30	*	*	1,592 59
177 21	.....	620 14	.....	197 78	972 12	3,640 75	746 85	2,679 08	2,434 62
854 22	446 23	1,059 00	110 33	1,000 00	1,000 00	1,000 00	300 00	1,200 00	1,200 00
2 75	.....	.....	.....	214 97	7 86	527 96	.....	.....	.....
2,810 80	1,478 90	4,666 48	379 56	4,277 31	5,061 26	8,506 13	1,128 27	5,101 41	6,400 06
1,372 87	650 50	2,019 50	133 05	1,711 73	2,004 97	3,751 12	967 23	3,084 34	3,010 99
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
62 35	.....	123 47	.....	274 00	85 28	683 36	.....	52 15	156 80
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
39 04	.....	43 39	24 78	61 52	53 80	75 00	.....	73 00	58 37
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
254 08	238 33	549 56	66 19	785 52	817 85	329 67	37 69	545 77	595 22
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
953 49	34 33	1,373 10	125 35	846 15	875 17	1,093 91	97 60	383 93	577 57
2,681 83	923 16	4,109 02	349 37	3,678 92	3,837 07	5,933 06	1,102 52	4,139 19	4,398 94
128 97	555 74	557 46	30 19	598 39	1,224 19	2,573 07	25 75	962 22	2,001 12
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	475 00	.....	460 00	375 00	500 00	.....	425 00	500 00
128 97	555 74	82 46	30 19	138 39	849 19	2,073 07	25 75	537 22	1,501 12

xa Hydro Department operated separately.
xh Hydro Department operated by municipal officials.
"c" 1 month's operation.
"e" 3 months' operation.
"g" 5 months' operation.

STATEMENT

Comparative Detailed Operating Reports of Electric Departments of Hydro

Municipality Population	Hagersville xa 1,105		Winchester xh 1,065				Port Credit 1,046 xa
——	1916	1917	1914	1915	1916	1917	1913
EARNINGS							
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Domestic Light	1,606 80	1,602 64	2,972 09	1,698 40	1,812 29	2,330 67	1,963 22
Commercial Light	1,343 82	1,252 54	*	1,336 85	1,364 47	1,546 53	*
Power	2,527 92	2,289 37	.....	.....	227 52	438 22	848 59
Street Light	1,200 00	1,200 00	1,500 00	1,500 00	1,500 00	1,500 00	696 00
Miscellaneous	.....	87 90	.....	.....	39 36	.....	.....
Total	6,678 54	6,432 45	4,472 09	4,535 25	4,943 64	5,815 42	3,507,81
EXPENSES							
Power Purchased	3,163 30	3,165 44	1,827 07	2,137 86	2,337 50	2,685 68	1,210 65
Sub-Stn. Operation	.....	.....	.....	.....	.....	.....	.....
" " Maint'ce.	.....	.....	.....	.....	.....	.....	.....
Dist. System, Operation and Maintenance	65 66	512 75	2 32	501 85	156 00	484 69	22 21
Line Transformer M't'c'e.	.....	.....	.....	.....	.....	.....	.....
Meter Maintenance	.....	.....	.....	.....	.....	.....	.....
Consumers' Premises—Exp.	.....	.....	.....	.....	.....	.....	.....
Street Light Sys., Operation and Maintenance	.....	136 30	58 50	60 26	35 28	96 42	121 27
Promotion of Business	.....	.....	.....	.....	.....	.....	.....
Billing and Collecting	.....	.....	.....	.....	.....	.....	.....
Gen. Office, Sal. and Exp.	748 01	759 91	173 09	380 55	714 53	444 98	171 82
Undistributed Expenses	.....	.....	.....	.....	.....	.....	.....
Int. and Deb. Payments	550 80	550 80	541 80	795 91	773 70	773 70	534 23
Total Expenses	4,527 77	5,125 20	2,602 78	3,876 43	4,017 01	4,485 47	2,060 18
Surplus	2,150 77	1,307 25	1,869 31	658 82	926 63	1,329 95	1,447 63
Loss	.....	.....	.....	.....	.....	.....	.....
Depreciation Charge	380 00	430 00	500 00	465 00	370 00	425 00	446 00
Surp. Less Depr. Chg.	1,770 77	877 25	1,369 31	193 82	556 63	904 95	1,001 63

xa Hydro Department operated by itself.
xh Hydro Department operated by municipal officials.
* Domestic and Commercial combined.

" C "—Continued

Municipalities for the years ending Dec. 31st, 1913, 1914, 1915, 1916 and 1917

Port Credit xa 1,046				Beaverton xh 1,015			Tavistock xa	Markdale 989 xa	
1914	1915	1916	1917	1915	1916	1917	1917	1916	1917
				q				l	
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
2,461 42	1,975 29	1,781 49	1,822 36	1,484 62	1,417 39	1,482 00	1,155 63	934 65	1,241 47
*	587 11	464 02	452 84	1,149 67	1,065 23	1,041 84	1,396 92	972 28	1,105 58
308 88	236 47	257 40	246 63	456 74	383 45	650 02	1,915 65	35 76	718 89
810 60	1,000 00	1,033 00	1,075 00	1,057 72	923 04	931 68	1,711 71	540 46	684 21
.....	.....	.....	.....	109 08	62 20	132 95	.....	252 79	434 56
3,580 90	3,798 87	3,535 91	3,596 83	4,257 83	3,851 31	4,238 49	6,179 21	2,735 94	4,184 71
1,333 00	1,406 46	1,546 06	1,563 97	2,429 19	2,150 00	2,344 48	4,119 52	1,039 68	1,563 05
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
23 51	77 77	386 30	299 45	83 17	107 54	413 43	132 88	80 13	125 06
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
72 77	22 29	44 40	71 47	.....	32 22	124 44	27 75	43 09	3 25
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
450 67	470 75	214 04	488 75	152 02	432 41	575 31	620 35	288 23	211 48
18 46	.....	.....	.....	.....	.....	.....	61 35	.....	.....
571 55	537 22	568 95	678 61	884 64	855 20	769 86	470 07	657 86	892 65
2,469 96	2,514 49	2,759 75	3,102 25	3,549 02	3,577 37	4,227 52	5,431 92	2,108 99	2,795 49
1,110 94	1,284 38	776 16	494 58	708 81	273 94	10 97	747 39	626 95	1,389 22
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
535 00	600 00	470 00	520 00	.....	300 00	330 00	305 00	.....	340 00
575 94	684 38	306 16	*25 42*	708 81	*26 06*	*319 03*	442 39	626 95	1,049 22

xa Hydro Department operated by itself.
xh Hydro Department operated by municipal officials.
"l" 9 months' operation.
"q" 14 months' operation.
* Domestic and Commercial combined.
Italics denote losses.

STATEMENT

Comparative Detailed Operating Reports of Electric Departments of Hydro

Municipality	Stayner xa					Cannington xa	
Population	972					903	
——	1913	1914	1915	1916	1917	1915	1916
EARNINGS	d					q	
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Domestic Light	158 48	909 58	995 47	1,012 15	1,109 46	1,599 40	1,720 25
Commercial Light	116 91	747 93	933 55	997 39	957 56	1,120 04	973 63
Power	301 86	1,699 08	1,694 94	1,835 29	1,009 88	464 26	462 47
Street Light	35 00	707 50	607 25	609 00	685 50	980 12	831 96
Miscellaneous	.....	.....	.....	.....	.....	22 58	.....
Total	612 25	4,064 09	4,231 21	4,453 83	3,762 40	4,186 40	3,988 31
EXPENSES							
Power Purchased	187 52	2,726 45	2,524 18	2,725 01	1,711 79	2,664 31	2,363 67
Sub-Stn. Operation	.....	.....	.....	.....	.....	.....	.....
" " Maint'ce	.....	.....	.....	.....	.....	.....	.....
Dist. System, Operation and Maintenance	.....	56 85	67 53	155 26	339 68	251 70	.....
Line Transformer M't'c'e	.....	.....	.....	.....	.....	.....	.....
Meter Maintenance	.....	.....	.....	.....	.....	.....	.....
Consumers' Premises—Exp.	.....	.....	.....	.....	.....	.....	.....
Street Light Sys., Operation and Maintenance	.....	96 00	53 78	.....	49 52	11 04	33 72
Promotion of Business	.....	.....	.....	.....	.....	.....	.....
Billing and Collecting	.....	.....	.....	.....	.....	.....	.....
Gen. Office, Sal. and Exp.	14 48	31 00	98 02	358 14	169 04	223 48	690 83
Undistributed Expenses	.....	.....	.....	.....	.....	.....	48 80
Int. and Deb. Payments	340 82	784 66	784 66	753 16	1,220 61	1,006 80	898 52
Total Expenses	542 82	3,694 96	3,528 17	3,991 57	3,490 64	4,157 69	4,035 54
Surplus	69 43	369 13	703 04	462 26	271 76	28 71	.....
Loss	.....	.....	.....	.....	.....	.....	47 23
Depreciation Charge	.....	115 00	300 00	280 00	420 00	.....	375 00
Surp. Less Depr. Chg.	69 43	254 13	403 04	182 26	*148 24*	28 71	*422 23*

xa Hydro Department operated separately.
"d" 2 months' operation.
Italics denote losses.

" C "—Continued

Municipalities for the years ending Dec. 31st, 1913, 1914, 1915, 1916 and 1917

Canning-ton xa 903	Milverton 890 xh		Dutton xa 870			Chesterville xh 854			
1917	1916	1717	1915	1916	1917	1914	1915	1916	1917
			e						
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
2,040 39	292 00	785 01	318 85	1,353 04	1,381 08	530 13	919 27	1,490 99	1,505 16
936 22	406 95	1,200 09	206 59	960 27	967 98	791 67	1,187 54	1,240 56	1,226 80
495 80	.....	2,899 56	.....	135 31	73 76	.....	.....	177 55	2,134 49
866 09	665 98	1,100 03	364 23	1,469 88	1,439 20	465 00	689 00	798 00	806 00
156 85	.....	.....	.....	111 39	28 75	.....	.....	.....	299 42
4,495 35	1,364 93	5,984 69	889 67	4,029 89	3,890 77	1,786 80	2,795 81	3,707 10	5,971 87
2,554 66	593 81	3,862 56	442 18	1,813 70	1,826 78	1,107 66	2,123 30	1,993 63	3,397 76
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
303 24	4 98	22 20	15 55	22 35	32 10	.....	126 30	336 99	445 32
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
141 37	33 48	95 16	12 04	69 91	125 39	.....	.....	48 29	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
491 25	8 08	284 28	79 30	204 36	274 66	59 00	56 77	120 00	130 91
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
604 03	690 86	765 33	144 70	476 04	434 44	344 00	572 55	435 34	532 64
4,094 55	1,331 21	5,029 53	693 77	2,586 36	2,693 37	1,510 66	2,878 92	2,934 25	4,506 63
400 80	33 72	955 16	195 90	1,443 53	1,197 40	276 14	.....	772 85	1,465 24
.....	.....	.....	.....	.....	.....	.....	83 11	.....	.....
390 00	.....	350 00	.....	240 00	245 00	247 50	.....	375 00	340 00
10 80	33 72	605 16	195 90	1,203 53	952 40	28 64	*83 11*	397 85	1,125 24

xa Hydro Department operated separately.
xh Hydro Department operated by municipal officials.
" e " 3 months' operation.
Italics denote losses.

STATEMENT

Comparative Detailed Operating Reports of Electric Departments of Hydro

Municipality	Pt. Stanley					Ayr	
Population	xa 849					xa 800	
——	1913	1914	1915	1916	1917	1915	1916
EARNINGS						n	
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Domestic Light	1,828 66	2,066 41	2,498 57	2,956 97	3,386 56	892 63	1,084 46
Commercial Light	1,771 70	1,753 60	1,736 42	1,551 37	1,714 56	773 08	804 00
Power	2,418 00	2,170 88	2,064 76	1,985 92	3,174 23	348 78	393 39
Street Light	2,199 50	1,961 35	1,900 50	1,714 00	1,608 25	1,091 33	1,092 00
Miscellaneous	.....	157 77	226 18	214 00	60 47	.....	.....
Total	8,217 86	8,110 01	8,426 43	8,422 26	9,944 07	3,105 82	3,373 85
EXPENSES							
Power Purchased	3,506 43	3,682 26	4,735 96	4,753 04	4,865 21	1,170 61	1,320 35
Sub-Stn. Operation	.....	.....	.....	.....	.....	.....	.....
" " Maint'ce...	.....	.....	.....	.....	.....	.....	.....
Dist. System, Operation and Maintenance	354 49	116 92	65 01	97 43	318 50	.....	.....
Line Transformer M't'c'e...	.....	.....	.....	.....	.....	.....	.....
Meter Maintenance	.....	.....	.....	.....	.....	.....	.....
Consumers' Premises—Exp..	.....	.....	.....	.....	.....	.....	.....
Street Light Sys., Operation and Maintenance	.....	.....	63 13	191 12	442 90	45 20	44 52
Promotion of Business.....	.....	.....	.....	.....	.....	.....	.....
Billing and Collecting.....	292 81	286 23	.....	.....	.....	.....	.....
Gen. Office, Sal. and Exp...	368 47	581 96	919 21	940 24	1,530 60	397 82	301 98
Undistributed Expenses....	.....	.....	.....	.....	.....	.....	115 74
Int. and Deb. Payments....	1,188 91	1,232 82	1,232 82	1,232 82	1,232 82	1,119 49	1,076 82
Total Expenses	5,711 11	5,900 19	7,016 13	7,214 65	8,390 03	2,733 12	2,859 41
Surplus	2,506 75	2,209 82	1,410 30	1,207 61	1,554 04	372 70	514 44
Loss	.....	.....	.....	.....	.....	.....	.....
Depreciation Charge...	617 75	950 00	740 00	665 00	748 92	250 00	260 00
Surp. Less Depr. Chg..	1,889 00	1,259 82	670 30	542 61	805 12	122 70	254 44

xa Hydro Department operated separately.
"n" 11 months' operation.

"C"—Continued

Municipalities for the years ending Dec. 31st, 1913, 1914, 1915, 1916 and 1917

Ayr xa 800	Waterdown xh 785					Thamesville xh 769			Hensall xh 750
1917	1913	1914	1915	1916	1917	1915	1916	1917	1917
			†	†	†	e			
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
1,124 21	1,164 29	1,054 13	1,202 41	1,218 86	1,317 48	378 79	1,729 79	1,829 34	1,038 57
857 27	*	535 83	567 65	575 10	529 70	283 86	1,021 17	949 80	610 79
966 44	917 63	1,011 38	1,207 80	1,149 78	1,232 89	.....	.....	.....	81 39
1,092 00	435 00	510 00	580 80	590 00	590 00	255 00	1,030 00	1,050 00	838 75
.....	.....	418 46	1,488 36	1,681 41	1,818 82	.....	25 42	.....	.....
4,039 92	2,516 94	3,529 80	5,046 22	5,215 15	5,488 89	917 65	3,806 38	3,829 14	2,569 50
1,433 01	988 00	1,660 71	1,605 10	2,003 34	1,597 37	537 22	1,872 33	1,835 05	1,340 04
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
37 99	183 71	67 66	281 36	354 12	216 77	4 15	22 40	65 59	120 35
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
52 71	35 31	48 15	17 00	41 10	92 02	40 00	20	34 61	32 16
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
364 97	213 14	207 87	327 69	392 97	400 52	116 00	262 83	493 84	157 42
.....	.....	.....	.....	.....	.....	.....	.....	22 91	.....
1,150 41	521 56	723 09	1,243 23	1,482 95	1,480 95	.....	740 65	829 95	613 39
3,039 09	1,941 72	2,707 48	3,474 38	4,274 48	3,787 63	697 37	2,898 41	3,281 95	2,263 36
1,000 83	575 22	822 32	1,571 84	940 67	1,701 26	220 28	907 97	547 19	306 14
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
305 00	365 00	420 00	1,000 00	887 00	840 00	.....	190 00	235 00	.....
695 83	210 22	402 32	571 84	53 67	817 26	220 28	717 97	312 19	306 14

xa Hydro Department operated separately.
xh Hydro Department operated by municipal officials.
"e" 3 months' operation.
† Miscellaneous Revenue includes Rural.

STATEMENT

Comparative Detailed Operating Reports of Electric Departments of Hydro

Municipality	Bolton xh			West Lorne xa	Dundalk xh		Both-well xh
Population	727			725	721		703
——	1915	1916	1917	1917	1916	1917	1915
	m						e
EARNINGS	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Domestic Light	624 86	926 86	1,191 92	578 98	924 30	926 52	230 61
Commercial Light	553 80	882 26	698 70	602 00	960 58	872 71	191 21
Power	313 74	3,947 32	2,856 39	.....	618 52	876 00	.....
Street Light	811 25	893 75	855 00	1,286 63	744 00	744 00	219 25
Miscellaneous	.....	186 00	133 52	.....	.....	80 60	.....
Total	2,303 65	6,836 19	5,735 53	2,467 61	3,247 40	3,499 83	641 07
EXPENSES							
Power Purchased	1,126 94	4,120 46	3,197 77	1,230 13	1,362 22	1,649 67	440 00
Sub-Stn. Operation	.....	.....	.....	.....	.....	.....	.....
" " Maint'ce	.....	.....	.....	.....	.....	.....	.....
Dist. System, Operation and Maintenance	206 57	30 82	214 50	1 50	30 00	31 70	.....
Line Transformer M't'c'e.	.....	.....	.....	.....	.....	.....	.....
Meter Maintenance	.....	.....	.....	.....	.....	.....	.....
Consumers' Premises—Exp.	.....	.....	.....	.....	.....	.....	.....
Street Light Sys., Operation and Maintenance	12 12	77 61	12 57	8 25	.....	69 81	36 72
Promotion of Business	.....	.....	.....	.....	.....	.....	.....
Billing and Collecting	.....	.....	.....	.....	.....	.....	.....
Gen. Office, Sal. and Exp.	314 26	289 94	274 77	230 40	158 80	257 28	4 80
Undistributed Expenses	.....	.....	.....	.....	.....	.....	.....
Int. and Deb. Payments	552 32	866 16	921 66	502 50	818 56	829 24	.....
Total Expenses	2,212 21	5,384 99	4,621 27	1,972 78	2,369 58	2,837 70	481 52
Surplus	91 44	1,441 20	1,114 26	494 83	877 82	662 13	159 55
Loss	.....	.....	.....	.....	.....	.....	.....
Depreciation Charge	.....	321 00	410 00	.....	200 00	240 00	.....
Surp. Less Depr. Chg.	91 44	1,120 20	704 26	494 83	677 82	422 13	159 55

xh Hydro Department operated by municipal officials.
"e" 3 months' operation.
"m" 10 months' operation.

"C"—Continued

Municipalities for the years ending Dec, 31st, 1913, 1914, 1915, 1916 and 1917

Bothwell 703		Lucan xh 662			Rodney xh 625	Grand Valley xh 640	Woodbridge xh 639		
1916	1917	1915	1916	1917	1917	1917	1915	1916	1917
		n							
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
928 16	1,085 92	824 07	1,124 73	1,283 01	487 46	714 68	367 49	507 10	698 53
768 59	825 43	687 37	857 11	870 97	665 84	964 59	443 53	556 82	579 56
.....	1,500 00	18 66	159 67	2,756 92	28 60	.....	498 44	2,221 33	2,384 67
1,186 06	1,146 96	812 60	979 50	978 75	1,058 63	710 00	960 00	963 00	972 00
.....	.....	108 10	135 55	.....	9 51	26 17	.....	.....	.....
2,882 81	4,558 31	2,450 80	3,256 56	5,889 65	2,250 04	2,415 44	2,269 46	4,248 25	4,634 76
1,604 92	2,603 48	1,511 32	1,543 95	3,901 81	1,372 86	1,132 49	877 63	2,461 11	2,538 06
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
15 45	23 69	.....	66 30	133 16	23 90	61 50	66 65	44 81	39 56
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
11 16	33 86	.....	14 50	34 25	46 80	41 29	24 96	48 79	135 24
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
114 77	161 78	440 03	254 59	265 93	173 90	318 00	153 75	284 01	219 86
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
565 99	793 15	412 43	873 49	886 03	426 22	932 67	239 38	636 88	641 41
2,312 29	3,615 96	2,363 78	2,752 83	5,221 18	2,043 68	2,485 93	1,362 37	3,475 60	3,574 13
570 52	942 35	87 02	503 73	668,47	206 36	.....	907 09	772 65	1,060 63
.....	.....	.....	.....	.....	.....	70 49	.....	.....	.....
135 00	185 00	.....	270 00	355 00	.....	.....	425 00	300 00	360 00
435 52	757 35	87 02	233 73	313 47	206 36	*70 49*	482 09	472 65	700 63

xh Hydro Department operated by municipal officials.
"n" 11 months' operation.
Italics denote losses.

STATEMENT

Comparative Detailed Operating Reports of Electric Departments of Hydro

Municipality	Ailsa Craig		Creemore				Coldwat'r
	xh		xh				xh
Population	586		585				579
——	1916	1917	1914	1915	1916	1917	1913
	n		d				
EARNINGS							
Domestic Light	579 57	776 93	97 31	699 81	922 41	973 25	735 68
Commercial Light	213 46	255 84	127 31	937 84	1,041 90	1,124 74	*
Power	15 57	1,591 95	39 60	939 20	1,151 96	1,210 57	247 19
Street Light	819 62	790 50	138 80	857 28	874 58	880 08	532 00
Miscellaneous	.....	.....	.....	1 35	6 00	.....	.....
Total	1,628 22	3,415 22	403 02	3,435 48	3,996 85	4,188 64	1,514 87
EXPENSES							
Power Purchased	746 02	2,086 39	162 00	2,580 53	2,252 69	2,296 27	535 86
Sub-Stn. Operation	.....	.....	.....	.....	.....	.....	.....
" " Maint'ce	.....	.....	.....	.....	.....	.....	.....
Dist. System, Operation and Maintenance	30 56	41 99	.....	185 17	182 00	163 25	74 58
Line Transformer M't'c'e.	.....	.....	.....	.....	.....	.....	.....
Meter Maintenance	.....	.....	.....	.....	.....	.....	.....
Consumers' Premises—Exp.	.....	.....	.....	.....	.....	.....	.....
Street Light Sys., Operation and Maintenance	16 74	30 82	.....	14 80	22 20	37 61	32 92
Promotion of Business	.....	.....	.....	.....	.....	.....	.....
Billing and Collecting	.....	.....	.....	.....	.....	.....	.....
Gen. Office, Sal. and Exp.	100 07	88 73	6 14	221 98	257 16	146 68	1 50
Undistributed Expenses	.....	.....	.....	.....	.....	.....	.....
Int. and Deb. Payments	401 10	390 14	20 59	509 55	689 52	710 20	.....
Total Expenses	1,294 49	2,638 07	188 73	3,512 03	3,403 57	3,354 01	644 86
Surplus	333 73	777 15	214 29	.....	593 28	834 63	870 01
Loss	.....	.....	.....	76 55	.....	.....	.....
Depreciation Charge	180 00	245 00	.....	.....	200 00	230 00	375 00
Surp. Less Depr. Chg.	153 73	532 15	214 29	*76 55*	303 28	604 63	495 01

xh Hydro Department operated by municipal officials.
"d" 2 months' operation.
Italics denote losses.

"C"—Continued

Municipalities for the years ending Dec. 31st, 1913, 1914, 1915, 1916 and 1917

	Coldwater xh 579				Wyoming 544 xh		Flesherton 428 xh		Chatsworth 374 xh	
	1914	1915	1916	1917	1916	1917	1916	1917	1916	1917
					d				n	
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
	853 56	874 94	977 62	984 41	96 84	658 99	568 76	621 93	287 52	379 96
	589 85	703 35	848 82	640 85	85 38	581 47	423 83	387 92	193 15	253 75
	617 26	363 88	247 91	182 39	.....	.....	.....	.....	391 98	232 73
	528 00	528 00	528 00	528 00	128 00	768 00	504 00	504 00	325 00	325 00
	.....	.....	.....	.....	.....	.....	.....	.....	77 65	.....
	2,588 67	2,470 17	2,602 35	2,335 65	310 22	2,008 46	1,496 59	1,513 85	1,275 30	1,191 44
	897 12	1,018 75	1,008 22	973 06	72 52	1,019 82	809 49	864 64	727 65	696 65
	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	139 37	138 72	147 60	169 16	.....	36 97	.....	100 00	62 20	13 00
	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	32 00	20 00	22 32	30 72	22 32	.....	22 32	24 20	2 50	17 82
	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	68 00	80 00	100 00	90 92	21 48	161 93	185 46	82 45	91 78	132 02
	.....	300 00	226 90	.....	.....	.....	.....	.....	.....	.....
	481 64	481 64	481 64	481 64	103 04	577 97	85 34	453 30	310 81	308 02
	1,618 13	2,039 11	1,986 68	1,745 50	219 36	1,796 69	1,102 61	1,524 59	1,194 94	1,167 51
	970 54	431 06	615 67	590 15	90 86	211 77	393 98	.....	80 36	23 93
	.....	.....	.....	.....	.....	.....	.....	10 74	.....	.....
	380 00	380 00	325 00	350 00	.....	210 00	150 00	175 00	.....	165 00
	590 54	51 06	290 67	240 15	90 86	1 77	243 98	*185 74*	80 36	*141 07*

xh Hydro Department operated by municipal officials.
"d" 2 months' operation.
"n" 11 months' operation.
Italics denote losses.

STATEMENT

Comparative Detailed Operating Reports of Electric Departments of Hydro

Municipality Population	Embro xh 483			Woodville xh 388			Baden xh
——	1915	1916	1917	1915	1916	1917	1913
	n			q			
EARNINGS	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Domestic Light	400 50	633 95	664 53	324 34	496 52	689 70	884 11
Commercial Light	489 67	598 41	522 37	563 68	512 07	591 94	*
Power	.....	155 54	132 76	1,149 17	1,185 54	1,072 28	2,242 77
Street Light	620 68	685 10	690 32	507 60	423 44	427 80	830 95
Miscellaneous	.....	58 25	.....	.....	.....	.....	.....
Total	1,510 85	2,131 25	2,009 98	2,544 89	2,617 57	2,781 72	3,957 83
EXPENSES							
Power Purchased	782 02	1,057 98	1,092 36	1,928 05	1,787 72	1,932 05	2,807 04
Sub-Stn. Operation	.....	.....	.....	.....	.....	.....	.....
" " Maint'ce	.....	.....	.....	.....	.....	.....	.....
Dist. System, Operation and Maintenance	16 00	16 40	25 27	30 00	8 55	96 82	28 84
Line Transformer M't'c'e	.....	.....	.....	.....	.....	.....	.....
Meter Maintenance	.....	.....	.....	.....	.....	.....	.....
Consumers' Premises—Exp.	.....	.....	.....	.....	.....	.....	.....
Street Light Sys., Operation and Maintenance	36 28	94 61	79 63	26 64	11 04	30 72	.....
Promotion of Business	.....	.....	.....	.....	.....	.....	.....
Billing and Collecting	.....	.....	.....	.....	.....	.....	.....
Gen. Office, Sal. and Exp.	95 98	74 71	136 13	42 87	297 34	227 03	267 45
Undistributed Expenses	.....	.....	.....	.....	.....	.....	.....
Int. and Deb. Payments	285 25	390 30	390 30	295 48	330 46	275 24	325 26
Total Expenses	1,215 53	1,634 00	1,723 69	2,323 04	2,435 11	2,561 86	3,428 59
Surplus	295 32	497 25	286 29	221 85	182 46	219 86	529 24
Loss	.....	.....	.....	.....	.....	.....	.....
Depreciation Charge	250 00	235 00	295 00	.....	110 00	120 00	277 00
Surp. Less Depr. Chg.	45 32	262 25	11 29	221 85	72 46	99 86	252 24

xh Hydro Department operated by municipal officials.
"n" 11 months' operation.
"q" 14 months' operation.
* Domestic and Commercial combined.

"C"—Continued

Municipalities for the years ending Dec. 31st, 1913, 1914, 1915, 1916 and 1917

Baden xh				Brechin xh			Burford xh		
1914	1915	1916	1917	1915	1916	1917	1915	1916	1917
							h		
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
1,247 81	938 33	808 21	842 09	148 83	172 42	194 03	176 14	577 69	834 73
*	*	*	*	407 78	404 70	528 24	111 81	380 44	837 51
4,580 23	4,588 87	5,059 22	5,243 91	1,007 59	1,153 32	1,285 50	235 76	519 72	549 31
705 68	580 06	683 58	593 00	117 00	117 00	117 00	279 48	572 00	572 00
.....	.....	.....	85 31	.....	150 00	150 00	.....	.....	54 90
6,533 72	6,107 26	6,551 01	6,764 31	1,681 20	1,997 44	2,274 77	803 19	2,049 85	2,848 45
4,541 56	4,153 75	5,080 81	5,309 06	1,309 20	1,516 34	1,638 59	571 55	1,129 67	1,083 73
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
179 28	52 26	48 36	277 80	.....	.....	118 99	.....	25 84	30 35
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
14 52	43 53	11 04	15 36	.....	.....	18 00	.....	12 94	23 98
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
389 45	357 10	321 95	314 07	86 22	152 71	153 98	77 06	71 43	214 49
.....	.....	.....	.....	.....	.....	.....	.....	59 48	.....
325 26	373 71	325 28	291 47	96 80	171 09	176 25	201 21	413 25	421 49
5,450 07	4,980 35	5,787 44	6,207 76	1,492 22	1,840 14	2,105 81	849 82	1,712 61	1,774 04
1,083 65	1,126 91	763 57	556 55	188 98	157 30	168 96	.....	337 24	1,074 41
.....	.....	.....	.....	.....	.....	.....	46 63	.....	.....
280 00	300 00	275 00	310 00	.....	70 00	75 00	.....	165 00	208 00
803 65	826 91	488 57	246 55	188 98	87 30	93 96	*46 63*	172 24	866 41

xh Hydro Department operated by municipal officials.
"h" 6 months' operation.
* Domestic and Commercial combined.
Italics denote losses.

STATEMENT

Comparative Detailed Operating Reports of Electric Departments of Hydro

Municipality Population	Beachville xh					Burgessville xh	Comber xh
——	1913	1914	1915	1916	1917	1917	1915
	s						j
EARNINGS	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Domestic Light	562 37	587 33	363 33	400 81	419 11	359 41	214 87
Commercial Light	*	*	296 37	263 62	286 14	115 15	274 49
Power	5,993 81	5,368 04	5,593 15	5,393 02	6,354 25	815 36	.....
Street Light	206 03	150 00	150 00	150 00	504 00	335 48	448 37
Miscellaneous	.....	.....	.....	.....	.....	.....	.....
Total	6,762 21	6,105 37	6,402 85	6,207 45	7,563 50	1,625 40	937 73
EXPENSES							
Power Purchased	4,221 68	3,283 89	4,522 88	5,352 36	5,717 35	1,128 04	620 24
Sub-Stn. Operation	.....	.....	.....	.....	.....	.....	.....
" " Maint'ce	.....	.....	.....	.....	.....	.....	.....
Dist. System, Operation and Maintenance	54 34	34 85	27 76	56 33	43 60	9 82	.....
Line Transformer M't'c'e.	.....	.....	.....	.....	.....	.....	.....
Meter Maintenance	.....	.....	.....	.....	.....	.....	.....
Consumers' Premises—Exp.	.....	.....	.....	.....	.....	.....	.....
Street Light Sys., Operation and Maintenance	76 37	44 46	9 95	35 88	34 53	.....	.....
Promotion of Business	.....	.....	.....	.....	.....	.....	.....
Billing and Collecting	.....	.....	.....	.....	.....	.....	.....
Gen. Office, Sal. and Exp.	249 50	193 11	258 66	325 81	281 59	53 29	135 76
Undistributed Expenses	127 62	29 18	.....	38 36	.....	.....	.....
Int. and Deb. Payments	288 88	501 45	357 79	369 82	357 79	296 52	172 92
Total Expenses	5,018 39	4,086 40	5,177 04	6,178 56	6,434 86	1,487 67	928 92
Surplus	1,743 82	2,018 97	1,225 81	28 89	1,128 64	137 73	8 81
Loss	.....	.....	.....	.....	.....	.....	.....
Depreciation Charge	525 00	400 00	420 00	375 00	405 00	.....	.....
Surp. Less Depr. Chg.	1,218 82	1,618 97	805 81	*34 11*	723 64	137 73	8 81

xh Hydro Department operated by municipal officials.
"j" 7 months' operation.
"s" 24 months' operation.
* Domestic and Commercial combined.

"C"—Continued

Municipalities for the years ending Dec. 31st, 1913, 1914, 1915, 1916 and 1917

Comber xh		Drumbo xh			Delaware xh			Granton xh	
1916	1917	1915	1916	1917	1915	1916	1917	1916	1917
					m				
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
538 57	541 45	304 39	340 75	350 11	146 16	354 60	260 94	180 84	484 69
678 58	689 59	288 99	277 43	301 20	114 18	141 64	203 25	70 90	176 93
.....	.....	159 85	116 57	.....	.....	.....	.....	.....	333 85
779 51	775 50	455 00	420 00	420 00	188 18	241 50	241 50	240 01	480 00
.....	17 61	.....	.....	.....	.....	.....	.....	.....	.....
1,996 66	2,024 15	1,208 23	1,154 75	1,071 31	448 52	737 74	705 69	491 75	1,475 47
1,159 98	1,134 22	795 36	602 85	547 13	217 11	352 26	370 51	248 72	879 66
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
38 38	62 72	.....	3 35	5 60	.....	7 87	5 00	8 32	9 55
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
40 94	24 65	.....	11 04	16 36	.....	34 20	31 27	2 40	2 55
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
137 15	117 76	51 29	54 64	61 46	71 89	45 63	41 00	.....	72 98
50 40	.....	.....	.....	27 05	.....	.....	.....	.....	.....
378 26	436 58	281 33	271 11	278 54	77 13	229 35	196 97	108 53	267 70
1,805 11	1,775 93	1,127 98	942 99	936 14	366 13	669 31	644 75	385 77	1,232 44
191 55	248 22	80 25	211 76	135 17	82 39	68 43	60 94	105 98	243 03
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
145 00	177 00	.....	110 00	135 17	.....	80 00	100 00	.....	145 00
46 55	71 22	80 25	101 76	.....	82 39	*11 57*	*39 06*	105 98	98 03

xh Hydro Department operated by municipal officials.
"m" 10 months' operation.
Italics denote losses.

STATEMENT

Comparative Detailed Operating Reports of Electric Departments of Hydro

Municipality Population	Dorchester xh			Dublin xh	Elmvale xh		
——	1915	1916	1917	1917	1913	1914	1915
					h		
EARNINGS	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Domestic Light	579 23	613 03	768 08	16 21	284 34	673 18	704 12
Commercial Light	309 88	275 82	177 25	45 20	358 60	896 11	778 93
Power	287 95	667 93	314 48	44 55	.....	438 38	1,186 44
Street Light	85 72	326 74	378 00	83 33	302 00	624 00	624 00
Miscellaneous	.....	.....	.....	222 55	.....	.....	.....
Total	1,262 78	1,883 52	1,637 81	411 84	944 94	2,631 67	3,293 49
EXPENSES							
Power Purchased	583 47	785 60	721 46	101 80	506 33	898 78	1,335 80
Sub-Stn. Operation	.....	.....	.....	.....	.....	.....	.....
" " Maint'ce	.....	.....	.....	.....	.....	.....	.....
Dist. System, Operation and Maintenance	.....	33 19	77 69	.....	7 86	326 94	300 00
Line Transformer M't'c'e	.....	.....	.....	.....	.....	.....	.....
Meter Maintenance	.....	.....	.....	.....	.....	.....	.....
Consumers' Premises—Exp.	.....	.....	.....	.....	.....	.....	.....
Street Light Sys., Operation and Maintenance	.....	22 77	18 91	.....	.....	.....	15 17
Promotion of Business	.....	.....	.....	.....	.....	.....	.....
Billing and Collecting	.....	.....	.....	.....	.....	.....	.....
Gen. Office, Sal. and Exp.	58 54	102 37	150 74	16 40	75 12	434 67	213 27
Undistributed Expenses	.....	.....	.....	.....	.....	.....	.....
Int. and Deb. Payments	159 47	281 55	396 95	10 61	449 76	434 67	546 42
Total Expenses	801 48	1,225 48	1,365 75	128 81	1,039 07	2,108 42	2,410 66
Surplus	461 30	658 04	272 06	283 03	.....	523 25	882 83
Loss	.....	.....	.....	.....	94 13	.....	.....
Depreciation Charge	200 00	150 00	185 00	.....	.....	350 00	385 00
Surp. Less Depr. Chg.	261 30	508 04	87 06	283 03	*94 13*	173 25	497 83

xh Hydro Department operated by municipal officials.
"h" 6 months' operation.
Italics denote losses.

"C"—Continued

Municipalities for the years ending Dec. 31st, 1913, 1914, 1915, 1916 and 1917

Elmvale xh		Highgate xh	Holstein xh		Lambeth xh			Lynden xh		
1916	1917	1917	1916	1917	1915	1916	1917	1915	1916	1917
			j		l			d		
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
816 74	881 20	416 49	141 80	238 48	344 47	575 65	721 51	60 00	254 76	272 49
736 74	696 79	467 76	169 63	209 74	119 00	208 96	252 56	28 94	227 57	213 11
1,043 96	810 96	64 22	.....	.....	455 90	249 36	182 50	.....	650 38	2,912 96
624 00	624 00	709 50	124 00	186 00	295 16	420 00	420 00	67 50	360 00	360 00
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
3,221 44	3,012 95	1,658 07	435 43	634 22	1,214 53	1,453 97	1,576 57	156 44	1,492 71	3,758 56
1,352 32	1,439 46	850 23	213 51	295 80	800 72	819 20	786 85	55 95	920 13	2,682 45
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
300 00	300 00	3 90	12 17	47 31	20 10	3 09	28 05	.....	23 89	34 29
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
56 28	26 40	28 32	75	7 70	.....	70 99	70 85	.....	24 54	23 52
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
147 24	229 52	194 89	37 56	64 05	44 71	58 32	73 72	.....	70 10	77 83
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
498 83	458 22	316 02	229 17	242 72	156 10	382 49	260 84	.....	315 32	309 28
2,354 67	2,453 60	1,393 36	493 16	657 58	1,021 63	1,334 09	1,220 31	55 95	1,353 98	3,127 37
866 77	559 35	264 71	.....	.....	192 90	119 88	356 26	100 49	138 73	631 19
.....	.....	.....	57 73	23 36	.....	.....	.....	.....	.....	.....
290 00	330 00	.....	.....	75 00	.....	100 00	160 00	.....	120 00	150 00
576 77	229 35	264 71	*57 73*	*98 36*	192 90	19 88	196 26	100 49	18 73	481 19

xh Hydro Department operated by municipal officials.
"d" 2 months' operation.
"j" 7 months' operation.
"l" 9 months' operation.
Italics denote losses.

STATEMENT

Comparative Detailed Operating Reports of Electric Departments of Hydro

Municipality Population	Mount Brydges xh			Otterville xh		Plattsville xh	
——	1915	1916	1917	1916	1917	1915	1916
	l			m			
EARNINGS	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Domestic Light	427 45	644 75	540 17	476 40	537 88	551 39	666 30
Commercial Light	*	170 46	344 16	111 14	290 32	477 71	580 62
Power	517 50	760 58	627 07	22 50	47 44	1,128 27	1,436 62
Street Light	449 66	532 00	532 00	269 15	340 00	498 00	534 00
Miscellaneous	.....	.....	8 32	.....	.....	.....	.....
Total	1,394 61	2,107 79	2,051 72	879 19	1,215 64	2,655 37	3,217 54
EXPENSES							
Power Purchased	1,025 71	1,308 69	1,108 88	429 36	605 98	2,031 19	2,079 85
Sub-Stn. Operation	.....	.....	.....	.....	.....	.....	.....
" " Maint'ce	.....	.....	.....	.....	.....	.....	.....
Dist. System, Operation and Maintenance	22 05	12 57	48 26	3 15	21 30	.....	49 30
Line Transformer M't'c'e.	.....	.....	.....	.....	.....	.....	.....
Meter Maintenance	.....	.....	.....	.....	.....	.....	.....
Consumers' Premises—Exp.	.....	.....	.....	.....	.....	.....	.....
Street Light Sys., Operation and Maintenance	.....	28 00	28 20	11 04	104 70	14 02	19 49
Promotion of Business	.....	.....	.....	.....	.....	.....	.....
Billing and Collecting	.....	.....	.....	.....	.....	.....	.....
Gen. Office, Sal. and Exp.	117 38	79 10	87 30	74 29	121 32	85 42	86 58
Undistributed Expenses	.....	51 09	.....	.....	.....	.....	.....
Int. and Deb. Payments	358 60	296 20	290 35	346 74	392 33	386 29	346 17
Total Expenses	1,523 74	1,775 65	1,562 99	864 58	1,245 63	2,516 92	2,581 39
Surplus	.....	332 14	488 73	14 61	.....	138 45	636 15
Loss	129 13	.....	.....	.....	29 99	.....	.....
Depreciation Charge	.....	125 00	150 00	.....	154 00	.....	145 00
Surp. Less Depr. Chg.	*129 13*	207 14	338 73	14 61	*183 99*	138 45	491 15

xh Hydro Department operated by municipal officials.
"l" 9 months' operation.
"m" 10 months' operation.
* Domestic and Commercial combined.
Italics denote losses.

"C"—Continued

Municipalities for the years ending Dec. 31st, 1913, 1914, 1915, 1916 and 1917

Platts-ville xh	Princeton xh			Port McNicoll xh			Sunderland xh		
1917	1915	1916	1917	1915	1916	1917	1915	1916	1917
	n			n			q		
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
670 35	440 42	657 80	789 51	415 03	618 82	829 39	794 83	752 64	858 64
583 58	71 57	127 81	178 43	311 20	301 92	381 25	939 85	840 22	745 91
768 37	.....	192 92	.....	.....	7 37	77 41	.....	211 86	731 14
527 00	340 00	340 00	340 00	351 00	336 00	336 00	323 82	272 16	272 16
.....	.....	6 61	3 50	.....	.....	.....	20 08	.....	.....
2,549 30	851 99	1,325 14	1,311 44	1,077 23	1,264 11	1,624 05	2,078 58	2,076 88	2,607 85
1,611 07	507 23	919 15	677 07	616 27	670 51	563 03	1,347 67	1,319 06	1,780 14
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
12 35	.....	9 90	3 30	18 88	99 30	51 66	36 80	.....	135 48
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
58 99	.....	15 93	33 36	24 24	33 48	15 65	24 96	22 32	3 00
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
89 86	11 84	132 49	64 67	164 58	169 56	178 56	33 27	309 87	240 71
.....	.....	.....	26 08	.....	.....	.....	.....	.....	.....
340 67	263 35	239 57	248 97	203 14	482 51	436 32	399 07	399 07	492 32
2,112 94	782 42	1,317 04	1,053 45	1,027 11	1,455 36	1,245 22	1,841 77	2,050 32	2,651 65
436 36	69 57	8 10	257 99	50 12	.....	378 83	236 81	26 56	.....
.....	.....	.....	.....	.....	191 25	.....	.....	.....	43 80
160 00	.....	96 00	110 00	.....	130 00	164 00	.....	150 00	160 00
276 36	69 57	*87 90*	147 99	50 12	*321 25*	214 83	236 81	*123 44*	*203 80*

xh Hydro Department operated by municipal officials.
"n" 11 months' operation.
"q" 14 months' operation.
Italics denote losses.

STATEMENT

Comparative Detailed Operating Reports of Electric Departments of Hydro

Municipality	Rockwood					St. George	
Population	xh					xh	
——	1913	1914	1915	1916	1917	1915	1916
	f					f	
EARNINGS	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Domestic Light	230 27	848 55	731 97	733 66	795 54	203 23	832 23
Commercial Light	*	*	251 27	388 05	380 90	139 16	474 38
Power	480 82	1,542 01	907 57	903 57	1,097 05	311 30	583 52
Street Light	196 00	549 50	507 50	506 00	528 00	202 50	495 00
Miscellaneous	.....	.....	.....	.....	.....	.....	.....
Total	907 09	2,940 06	2,398 31	2,531 28	2,801 49	856 19	2,385 13
EXPENSES							
Power Purchased	237 50	1,113 49	1,154 85	870 81	1,360 71	411 15	1,227 88
Sub-Stn. Operation	.....	.....	.....	.....	.....	.....	.....
" " Maint'ce.	.....	.....	.....	.....	.....	.....	.....
Dist. System, Operation and Maintenance	.....	.....	.....	36 26	49 31	.....	1 20
Line Transformer M't'c'e.	.....	.....	.....	.....	.....	.....	.....
Meter Maintenance	.....	.....	.....	.....	.....	.....	.....
Consumers' Premises—Exp.	.....	.....	.....	.....	.....	.....	.....
Street Light Sys., Operation and Maintenance	.....	36 14	13 92	46 97	16 80	.....	3 00
Promotion of Business	.....	.....	.....	.....	.....	.....	.....
Billing and Collecting	.....	.....	.....	.....	.....	.....	.....
Gen. Office, Sal. and Exp.	44 46	119 55	115 74	111 49	159 52	64 30	126 49
Undistributed Expenses	.....	.....	.....	.....	.....	.....	.....
Int. and Deb. Payments	357 49	413 19	445 80	395 77	338 50	172 00	412 83
Total Expenses	639 45	1,682 37	1,730 31	1,461 30	1,924 84	647 45	1,771 40
Surplus	267 64	1,257 69	668 00	1,069 98	876 65	208 74	613 73
Loss	.....	.....	.....	.....	.....	.....	.....
Depreciation Charge	.....	275 00	300 00	240 00	290 00	.....	150 00
Surp. Less Depr. Chg.	267 64	982 69	368 00	829 98	586 65	208 74	463 73

xh Hydro Department operated by municipal officials.
"f" 4 months' operation.
* Domestic and Commercial combined.

"C"—Continued

Municipalities for the years ending Dec. 31st, 1913, 1914, 1915, 1916 and 1917

St. George xh	St. Jacob's xh	Spring-field xh	Thorndale xh				Williamsburg xh		
1917	1917	1917	1914	1915	1916	1917	1915	1916	1917
			m						
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
1,046 91	135 66	240 08	446 27	299 37	328 67	382 95	403 72	568 66	551 07
478 96	143 85	135 72	*	374 09	403 01	413 03	139 26	224 29	280 09
642 64	497 52	167 13	329 27	542 53	459 79	475 53	.....	285 73	256 38
495 00	150 00	325 01	294 00	294 00	294 46	294 00	156 00	220 67	208 00
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
2,663 51	927 03	867 94	1,069 54	1,509 99	1,485 93	1,565 51	698 98	1,299 35	1,295 54
1,165 43	765 55	460 96	510 00	883 86	1,139 22	1,052 60	318 62	547 82	612 00
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
30 40	18 75	.....	5 25	71 52	74 42	16 58	82 50	97 63	134 73
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
19 50	.....	.....	29 04	7 19	65 18	30 72	.....	16 04	36 00
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
166 10	18 75	43 29	94 12	64 63	104 58	116 06	30 02	41 60	67 81
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
387 83	.....	273 78	109 92	11 74	205 60	203 24	211 27	220 67	220 67
1,769 26	803 05	778 03	748 33	1,138 94	1,589 00	1,419 20	642 41	923 76	1,071 21
894 25	123 98	89 91	321 21	371 05	.....	146 31	56 57	375 59	224 33
.....	.....	.....	.....	.....	103 07	.....	.....	.....	.....
175 00	.....	.....	130 00	135 00	85 00	115 00	.....	70 00	85 00
719 25	123 98	89 91	191 21	236 05	*188 07*	31 31	56 57	305 59	139 33

xh Hydro Department operated by municipal officials.
"m" 10 months' operation.
* Domestic and Commercial combined.
Italics denote losses.

STATEMENT

Comparative Detailed Operating Reports of Electric Departments of Hydro

Municipality Population	Thamesford xh				Waubaushene xh		
——	1914	1915	1916	1917	1915	1916	1917
	m				n		
EARNINGS	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Domestic Light	393 49	574 34	642 21	646 83	516 34	646 58	691 56
Commercial Light	323 92	481 78	537 42	588 64	220 50	496 47	455 62
Power	946 32	423 21	268 23	682 43	32 28	49 52	36 85
Street Light	372 16	469 00	476 00	476 00	377 00	348 00	360 00
Miscellaneous	.....	.....	.....	.....	.....	.....	.....
Total	2,035 89	1,948 33	1,923 86	2,393 90	1,146 12	1,540 57	1,544 03
EXPENSES							
Power Purchased	1,031 10	993 40	1,013 59	1,226 61	560 77	642 81	528 16
Sub-Stn. Operation	.....	.....	.....	.....	.....	.....	.....
" " Maint'ce	.....	.....	.....	.....	.....	.....	.....
Dist. System, Operation and Maintenance	9 80	7 19	2 50	225 84	16 55	110 16	57 26
Line Transformer M't'c'e	.....	.....	.....	.....	.....	.....	.....
Meter Maintenance	.....	.....	.....	.....	.....	.....	.....
Consumers' Premises—Exp.	.....	.....	.....	.....	.....	.....	.....
Street Light Sys., Operation and Maintenance	23 68	27 47	33 90	30 70	.....	17 38	17 16
Promotion of Business	.....	.....	.....	.....	.....	.....	.....
Billing and Collecting	.....	.....	.....	.....	.....	.....	.....
Gen. Office, Sal. and Exp.	125 94	159 32	122 89	112 95	175 55	112 77	240 20
Undistributed Expenses	.....	.....	48 84	5 01	.....	.....	.....
Int. and Deb. Payments.	249 94	209 41	477 08	266 91	220 84	425 56	305 15
Total Expenses	1,440 46	1,396 79	1,698 80	1,868 02	973 21	1,308 68	1,147 93
Surplus	595 43	551 54	225 06	525 88	172 91	231 89	396 10
Loss	.....	.....	.....	.....	.....	.....	.....
Depreciation Charge.	250 00	250 00	235 00	235 00	.....	115 00	150 00
Surp. Less Depr. Chg.	345 43	301 54	*9 94*	290 88	172 91	116 89	246 10

xh Hydro Department operated by municipal officials.
"m" 10 months' operation.
"n" 10 months' operation.
Italics denote losses.

"C"—Concluded

Municipalities for the years ending Dec. 31st, 1913, 1914, 1915, 1916 and 1917

Wellesley xh	Grantham Twp. xh		Stamford Twp. aa	Toronto Township xh			
1917	1916	1917	1917	1914	1915	1916	1917
	†	†		† r	†	†	†
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
642 52	3,030 72	4,089 45	2,875 85	8,151 12	8,615 27	8,369 78	9,938 55
353 33	.....	.....	*	.....	.....	.....	.....
2,784 78	.....	.....	12,977 72	.....	.....	.....	.....
828 12	.....	.....	936 00	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....
4,608 75	3,030 72	4,089 45	16,789 57	8,151 12	8,615 27	8,369 78	9,938 55
3,301 02	668 09	621 09	8,024 48	3,085 55	2,153 94	2,174 17	2,506 87
.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....
22 64	471 33	266 00	482 07	284 02	706 20	395 59	878 81
.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	36 00	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....
179 80	474 86	355 22	3,092 67	374 61	376 04	462 21	717 94
.....	.....	.....	.....	.....	.....	.....	.....
548 31	2,997 93	2,662 79	2,591 55	1,358 65	3,482 49	3,253 87	3,345 64
4,051 77	4,612 21	3,905 10	14,226 77	5,102 83	6,718 67	6,285 84	7,449 26
556 98	.....	184 35	2,562 80	3,048 29	1,896 60	2,083 94	2,489 29
.....	1,581 49	.....	.....	.....	.....	.....	.....
235 00	.....	264 00	1,200 00	.....	1,800 00	1,934 00	2,125 00
321 98	*1,581 49*	*79 65*	1,362 80	3,048 29	96 60	149 94	364 29

xh Hydro Department operated by municipal officials.
aa Operated by Hydro Commission.
† All Revenue Rural.
"r" 17 months' operation.
* Domestic and Commercial combined.
Italics denote losses.

STATEMENT "D"

Showing Comparative Revenue, Number of Consumers, Total Kw-hr. Consumption, Domestic and Commercial Light Average Monthly Consumption per Consumer, Average Monthly Bill, and Net Cost per Kw-hr. for the Years 1912, 1913, 1914, 1915, 1916 and 1917, also Average Horsepower Sold and Average Cost per Horsepower per Year to Consumers in 1917

Municipality	Year	Domestic Light							Commercial Light							Power				Total Number Consumers
		Revenue	Consumption	Number of Consumers	Av'g Monthly Consumption	Average Monthly Bill	Net Cost per Kw-hr.	Net Cost prior to Hydro	Revenue	Consumption	Number of Consumers	Av'g Monthly Consumption	Average Monthly Bill	Net Cost per Kw-hr.	Net Cost prior to Hydro	Revenue	Number of Consumers	Average Horse Power	Auerage Cost per Horse Power	
Toronto—		$ c.	Kw-hrs.		Kw-hr	$ c.	cents	cents	$ c.	Kw-hrs.		Kw-hr	$ c.	cents	cents	$ c.			$ c.	
	1912	201,554 74	.....	11,441	.....	.....	.....	8+25	*	.....	*	.....	.....	.....	12+25	225,451 55	518	.....	.....	11,959
	1913	190,376 89	4,220,270	16,519	25	1 25	4.4		233,799 04	6,156,073	4,764	.....	4 09	3.8		347,708 88	1,037	.....	.....	22,320
	1914	289,645 45	6,240,882	23,181	27	1 22	4.5		305,534 31	7,683,589	6,276	116	4 61	3.9		483,681 15	1,494	.....	.....	30,951
	1915	331,807 18	8,599,559	29,724	27	1 04	3.9		291,907 92	10,243,496	7,227	126	3 60	2.8		575,239 17	1,504	.....	.....	38,455
	1916	335,181 19	11,250,291	34,347	29	89	3.1		272,243 06	11,491,577	7,406	131	3 10	2.4		612,918 32	1,707	.....	.....	43,460
	1917	414,043 17	15,341,150	41,358	34	91	2.7		297,459 72	12,763,343	9,341	126	2 96	2.3		899,474 48	2,028	36,856	17 35	52,727
Hamilton—																				
	1913	34,451 95	862,937	5,117	.....	.....	3.9	8+25	25,453 99	628,471	924	.....	.....	4.1	8	47,415 58	209	.....	.....	6,250
	1914	74,668 38	1,856,627	8,404	23	92	4		35,125 57	1,309,863	1,375	95	2 55	3.4		70,665 43	337	.....	.....	10,116
	1915	92,207 60	2,514,104	10,595	23	81	3.7		34,633 16	1,840,920	1,434	109	2 06	1.9		84,789 71	406	.....	.....	12,435
	1916	108,137 22	3,625,059	12,423	26	78	3		36,126 03	2,085,601	1,546	116	2 02	1.8		115,224 78	464	.....	.....	14,433
	1917	135,224 12	5,276,696	14,340	32	84	2.6		36,740 19	2,426,174	1,668	126	1 91	1.5		137,249 87	526	8,010	17 13	16,534
Ottawa—																				
	1912	62,598 18	.....	5,390	.....	.....	.....	7+8	51,365 91	.....	440	.....	.....	.....	7+8	25,299 94	90	.....	.....	5,920
	1913	68,032 27	.....	5,766	.....	1 02	.....		53,438 04	.....	818	.....	7 08	.....		26,978 76	152	.....	.....	6,736
	1914	68,767 48	1,376,353	6,342	19	95	5		51,769 72	1,061,263	852	106	5 16	4.9		31,748 23	156	.....	.....	7,350
	1915	67,441 19	1,767,519	7,338	22	82	3.8		46,636 99	1,501,978	1,060	131	4 07	3.1		32,126 50	140	.....	.....	8,538
	1916	72,875 12	2,131,307	7,912	23	80	3.4		42,569 96	1,786,603	1,107	137	3 27	2.4		42,996 39	188	.....	.....	9,207
	1917	81,506 24	2,376,141	8,636	24	82	3.4		48,546 77	2,048,160	1,167	150	3 57	2.4		63,173 09	204	3,553	17 72	10,007
London—																				
	1912	28,196 62	.....	3,851	.....	.....	.....	9+25	28,527 44	.....	792	.....	.....	.....	9+25	52,633 00	158	.....	.....	4,801
	1913	41,932 42	920,000	5,201	17	77	4.5		39,256 07	1,350,000	1,007	125	3 63	3.0		79,758 96	198	.....	.....	5,406
	1914	57,473 08	1,192,000	6,299	18	83	4.8		47,593 44	1,580,000	1,075	127	3 81	3		130,936 35	249	.....	.....	7,649
	1915	57,184 75	1,732,435	7,326	21	70	3.3		43,751 37	1,452,896	1,046	137	3 44	3		148,567 23	271	.....	.....	8,643
	1916	71,146 90	2,378,144	8,282	25	76	2.9		48,747 74	1,930,269	1,129	147	.....	2.5		180,204 33	295	.....	.....	9,706
	1917	86,454 36	3,283,286	9,036	31	83	2.6		52,511 01	2,277,566	1,261	159	3 66	2.4		181,973 61	**328	7,264	22 14	10,625

Brantford—																			
1914	7,103 77	148,427	1,184	.....	.....	4.8	8+13	5,392 87	166,469	300	.....	.....	3.6	8+13	647 69	11	.....	.....	1,495
1915	13,629 36	319,439	1,615	19	82	4.3		10,746 67	347,349	321	94	2 89	3.1		12,901 29	18	.....	.....	1,954
1916	17,504 44	468,324	2,056	21	79	3.7		10,530 19	419,933	334	107	2 68	2.5		24,213 00	26	.....	.....	2,316
1917	20,881 94	691,572	2,559	25	75	3.0		10,502 19	655 933	363	157	2 51	1.6		48,639 07	37	2,466	19 72	2,959
Windsor—																			
1914	3,143 41	.....	1,802	.....	.....	.....	12	1,107 38	.....	257	.....	.....	.....	8	9 77	10	.....	.....	2,069
1915	23,161 57	468,386	2,519	18	89	4.9		12,009 99	309,757	377	82	3 16	3.9		3,734 81	43	.....	.....	2,939
1916	35,565 79	726,442	3,180	21	104	4.9		16,831 60	465,683	439	95	3 44	3.6		7,370 82	66	.....	.....	3,685
1917	48,913 80	1,087,029	3,882	26	115	4.5	*	21,257 15	590,977	471	108	3 89	3.6		15,362 93	97	807	19 04	4,450
Peterborough—																			
1914	8,661 71	.....	2,692	.....	.....	.....		7,749 91	.....	507	.....	.....	.....		7,013 23	93	.....	.....	3,292
1915	27,998 24	.....	3,221	.....	79	.....	Flat	27,563 41	.....	602	.....	4 14	.....	Flat	30,185 83	113	.....	.....	3,936
1916	31,020 72	510,359	3,401	13	78	6.1		26,403 82	467,663	602	65	3 66	5.6		36,597 04	117	.....	.....	4,120
1917	40,043 65	973,937	4,152	22	88	4.1		26,601 65	613,865	671	80	3 49	4.3		46,235 49	122	2,871	16 10	4,945
Kitchener—																			
1912	14,585 02	.....	1,022	.....	.....	.....	11+25	19,080 32	.....	422	.....	.....	.....	11+25	28,654 23	105	.....	.....	1,549
1913	15,291 37	.....	1,291	.....	1 10	.....		19,548 91	.....	470	.....	3 65	.....		35,655 90	127	.....	.....	1,888
1914	17,757 08	359,307	1,694	20	99	4.9		19,549 45	562,630	519	95	3 29	3.5		49,173 17	130	.....	.....	2,343
1915	19,108 60	494,725	2,032	22	85	3.9		16,807 15	579,303	546	91	2 63	2.9		54,732 50	138	.....	.....	2,716
1916	20,876 63	582,754	2,407	22	79	3.6		17,323 67	801,789	543	123	2 65	2.2		62,436 31	147	.....	.....	3,097
1917	24,051 18	748,390	2,712	24	78	3.2		17,494 18	866,798	577	129	2 60	2.2		84,818 46	157	4,012	21 14	3,446
St. Catharines—																			
1914	2,013 49	53,572	833	.....	.....	3.7	7	412 75	22,843	92	.....	.....	1.9	7	12,742 98	20	.....	.....	945
1915	9,540 70	273,389	1,612	19	65	3.5		3,810 11	196,056	192	115	2 23	1.9		25,193 30	34	.....	.....	1,838
1916	16,419 57	591,765	2,410	24	68	2.8		5,925 49	318,877	247	121	2 25	1.5		40,688 67	48	.....	.....	2,705
1917	24,275 56	1,038,894	2,833	31	77	2.3		6,024 34	392,524	270	127	1 99	1.5		71,138 36	52	4,418	16 10	3,155
St. Thomas—																			
1912	7,596 01	.....	620	.....	.....	.....	11	18,741 74	.....	300	.....	.....	.....	11	14,761 30	60	.....	.....	980
1913	11,125 50	187,000	951	19	1 18	5.9		16,097 41	272,000	329	72	4 26	5.9		36,550 26	70	.....	.....	1,350
1914	13,221 00	277,539	1,499	19	90	4.8		13,480 75	346,994	384	81	3 15	3.9		44,247 13	92	.....	.....	1,975
1915	16,517 37	460,103	1,903	23	81	3.6		13,422 48	504,679	434	102	2 73	2.7		44,780 45	101	.....	.....	2,438
1916	20,210 52	629,102	2,241	25	81	3.2		15,145 47	607,131	464	93	2 81	2.5		46,698 91	107	.....	.....	2,812
1917	22,620 72	759,512	2,524	27	79	3.0		14,843 27	600,317	472	107	2 64	2.5		44,977 52	112	2,349	19 15	3,108
Stratford—																			
1912	6,942 56	.....	640	.....	90	.....	12+25	14,661 16	.....	316	.....	3 86	.....	12+25	8,834 40	76	.....	.....	1,032
1913	11,550 71	.....	1,042	.....	1 02	.....		17,072 61	.....	367	.....	4 15	.....		14,272 59	92	.....	.....	1,501
1914	15,180 91	269,459	1,403	18	1 03	5.5		16,336 30	345,639	396	76	3 55	4.7		16,519 24	99	.....	.....	1,898
1915	16,967 58	388,200	1,724	21	90	4.4		14,766 75	400,686	439	79	2 92	3.7		15,415 78	104	.....	.....	2,267
1916	20,108 76	553,441	1,993	26	90	3.6		14,803 08	601,616	463	110	2 75	2.5		23,506 12	103	.....	.....	2,559
1917	26,614 85	831,496	2,492	31	99	3.2		16,385 81	613,108	388	120	3 21	2.6		27,846 16	112	1,167	23 86	2,992

* Included in Domestic Light.
** London and Port Stanley Railway and London Street Railway revenue excluded.

STATEMENT "D"—Continued

Showing Comparative Revenue, Number of Consumers, Total Kw-hr. Consumption, Domestic and Commercial Light Average Monthly Consumption per Consumer, Average Monthly Bill, and Net Cost per Kw-hr. for the Years 1912, 1913, 1914, 1915, 1916 and 1917, also Average Horsepower Sold and Average Cost per Horse Power per Year to Consumers in 1917.

Municipality	Year	Domestic Light							Commercial Light							Power				Total Number of Consumers
		Revenue	Consumption	Number of Consumers	Av'g Monthly Consumption	Average Monthly Bill	Net Cost per Kw-hr.	Net Cost prior to Hydro	Revenue	Consumption	Number of Consumers	Av'g Monthly Consumption	Average Monthly Bill	Net Cost per Kw-hr.	Net Cost prior to Hydro	Revenue	Number of Consumers	Average Horse Power	Average Cost per Horse Power	
Guelph—		$ c.	Kw-hrs.		Kw-hr	$ c.	cents	cents	$ c.	Kw-hrs.		Kw-hr	$ c.	cents	cents	$ c.			$ c.	
	1912	10,251 87	.....	960	.....	.....	.....	8+25	16,400 57	.....	345	.....	.....	.....	8+15	30,139 00	73	.....	.....	1,378
	1913	11,528 07	224,373	1,260	17	87	5.2		15,075 61	287,561	400	67	3 38	5.2		42,091 34	85	.....	.....	1,745
	1914	16,920 54	286,032	1,573	17	1 00	5.9		15,923 51	325,080	441	65	3 16	4.9		38,148 46	80	.....	.....	2,094
	1915	15,514 10	366,928	1,824	18	76	4.2		12,692 86	437,567	474	83	2 32	2.8		38,404 28	81	.....	.....	2,379
	1916	17,221 76	469,528	2,033	20	74	3.7		13,710 72	522,526	490	91	2 36	2.6		48,369 83	86	.....	.....	2,609
	1917	19,379 44	594,936	2,202	23	77	3.3		13,760 01	576,911	505	97	2 31	2.4		57,380 71	87	2,578	22 26	2,794
Port Arthur—																				
	1913	81,830 66	.....	2,409	.....	.....	.....	8+25	*	.....	500	.....	.....	.....	8+25	51,748 11	55	.....	.....	2,964
	1914	38,097 65	.....	2,969	.....	.....	.....		32,933 91	.....	550	.....	.....	.....		92,804 49	55	.....	.....	3,574
	1915	32,048 37	.....	2,800	.....	.....	.....		28,662 58	.....	550	.....	.....	.....		85,060 78	50	.....	.....	3,400
	1916	31,152 52	.....	2,701	.....	.....	.....		27,439 63	.....	481	.....	.....	.....		96,913 51	46	.....	.....	3,228
	1917	33,358 31	.....	2,783	.....	.....	.....		28,235 05	.....	503	.....	.....	.....		111,367 47	42	5,093	21 88	3,328
Chatham—																				
	1915	5,581 54	110,552	949	.....	.....	5.5	8+25	2,806 81	81,805	180	.....	.....	3.4	8+25	449 70	7	.....	.....	1,136
	1916	10,155 37	176,508	1,171	14	80	5.8		7,427 36	174,204	215	81	3 48	4.3		3,766 37	25	.....	.....	1,401
	1917	13,245 86	257,773	1,261	18	91	5.1		10,633 12	249,739	271	86	3 65	4.3		16,573 93	46	654	25 34	1,578
Owen Sound—																				
	1916	16,003 61	225,620	1,376	.....	.....	7.1	6.4+15	23,724 21	388,717	435	.....	.....	6.1	6.4+15	13,772 61	83	.....	.....	1,894
	1917	15,740 76	266,322	1,438	16	93	5.9		13,809 15	341,361	419	67	271	4.1		28,667 22	84	1,176	24 37	1,941
Galt—																				
	1912	8,183 69	.....	830	.....	1 22	.....	11	9,732 86	.....	250	.....	.....	.....	11	10,042 59	47	.....	.....	1,127
	1913	10,535 38	.....	1,122	.....	1 10	.....		11,648 49	.....	353	.....	3 25	.....		16,575 61	65	.....	.....	1,540
	1914	15,797 16	300,121	1,745	20	1 08	5.3		11,952 75	289,857	339	68	2 80	4.1		23,826 87	70	.....	.....	2,154
	1915	17,024 42	512,443	2,038	23	75	3.3		8,794 36	350,788	375	92	2 10	2.3		30,547 84	75	.....	.....	2,488
	1916	19,961 17	716,396	2,236	28	78	2.8		10,485 26	532,860	386	115	2 30	2.0		36,029 78	79	.....	.....	2,701
	1917	24,248 31	1,023,106	2,444	36	86	2.4		12,082 97	694,661	371	156	2 71	1.7		48,261 79	83	2,716	17 77	2,898

Niagara Falls—																				
1916	21,733 29	.....	2,050	.....	.....	.....	3.5	13,259 02	.....	400	.....	.....	.....	Flat	9,613 01	80	.....	.....	2,530
1917	22,566 76	867,639	2,273	31	99	2.6		11,012 51	651,884	405	134	2 27	1.7		18,804 36	55	713	13 49	2,733
Woodstock—																				
1912	4,914 92	.....	464	.....	.....	.....	8+20	13,316 02	.....	265	.....	.....	.....	8+20	21,087 61	43	.....	.....	772
1913	6,495 02	100,000	636	17	1 08	6.5		12,942 32	298,000	282	77	3 95	5.2		20,262 52	55	.....	.....	973
1914	8,807 40	169,054	949	21	1 08	5.2		11,610 14	289,982	337	78	3 12	4.0		19,832 26	57	.....	.....	1,343
1915	10,472 14	230,297	1,099	20	88	4.5		11,718 95	371,787	360	90	2 80	3.1		20,742 18	62	.....	.....	1,521
1916	11,206 71	288,201	1,224	21	80	3.9		12,983 32	503,977	372	114	2 95	2.6		23,721 92	72	.....	.....	1,668
1917	12,216 48	341,160	1,363	22	79	3.6		12,573 08	554,660	387	122	2 76	2.3		23,191 47	66	2,130	.....	1,816
Brockville—																				
1916	12,897 12	144,913	965	.....	.....	9.0	9	21,994 02	253,153	312	.....	.....	8.7	9	15,828 62	31	.....	.....	1,308
1917	14,507 95	152,066	1,018	13	1 22	9.5		22,907 56	246,940	378	59	5 54	9.3		30,744 84	49	631	48 72	1,445
Welland—																				
1913	1,369 67	.....	408	.....	.....	.....	8+25	558 46	.....	53	.....	.....	.....	8+25	4,307 21	18	.....	.....	479
1914	4,411 20	117,328	492	22	82	3.7		1,676 38	64,449	53	100	2 64	2.6		8,305 71	23	.....	.....	568
1915	4,643 16	154,534	467	27	81	3.0		1,600 79	69,340	57	105	2 42	2.3		38,541 88	23	.....	.....	547
1916	4,800 06	154,706	536	26	79	3.1		1,580 48	94,582	75	141	2 40	1.7		78,184 81	24	.....	.....	635
1917	5,584 56	243,723	593	36	82	2.3		2,034 85	156,083	94	155	2 02	1.3		96,449 82	23	5,985	16 12	710
Walkerville—																				
1914	3,037 96	.....	790	.....	.....	.....	15—5	1,492 84	.....	175	.....	.....	.....	15-10-5	6,042 11	75	.....	.....	1,040
1915	13,036 98	241,771	1,159	21	1 12	5.4		7,836 93	157,198	195	70	3 49	4.4		39,523 81	72	.....	.....	1,421
1916	18,813 06	391,629	1,513	27	1 34	4.8		12,104 72	309,727	216	126	4 61	3.9		77,003 07	75	.....	.....	1,804
1917	23,683 25	483,770	1,883	24	1 16	4.9		15,350 67	358,594	225	136	5 81	4.3		80,075 42	71	2,408	33 25	2,179
Barrie—																				
1913	10,071 55	.....	563	.....	.....	.....	9	9,252 70	.....	200	.....	3 85	.....	9	3,390 29	13	.....	.....	776
1914	11,149 49	152,095	651	20	1 54	7.3		9,464 64	138,948	200	58	3 93	6.8		3,712 24	13	.....	.....	864
1915	11,087 68	147,307	843	18	1 24	7.1		9,572 91	177,000	252	65	3 50	5.4		4,567 76	14	.....	.....	1,109
1916	11,907 10	204,420	896	20	1 14	5.8		10,635 67	189,409	257	63	3 50	5.6		6,918 33	18	.....	.....	1,171
1917	11,232 68	242,297	942	22	1 02	4.6		8,750 24	185,095	253	61	2 86	4.8		7,978 72	19	310	25 74	1,214
Collingwood—																				
1913	7,013 66	83,406	477	.....	.....	8.4	11+10	9,362 17	108,676	220	.....	.....	8.4	11+10	896 72	18	.....	.....	715
1914	7,857 86	103,598	554	16	1 27	7.6		7,555 54	124,276	232	46	2 78	6.1		5,165 39	21	.....	.....	807
1915	7,094 27	118,336	622	17	1 00	6.0		5,688 26	116,583	233	42	2 04	4.9		9,527 70	26	.....	.....	881
1916	8,320 44	162,464	714	20	1 04	5.1		6,213 86	163,956	242	58	2 18	3.8		23,152 41	33	.....	.....	989
1917	8,734 98	243,070	835	26	94	3.6		5,398 59	189,485	236	66	1 99	2.8		38,989 24	41	1,558	25 04	1,112
Midland—																				
1912	5,878 05	.....	420	.....	.....	.....	9	5,878 05	.....	165	.....	.....	.....	9	3,188 03	18	.....	.....	603
1913	6,095 11	88,228	491	16	1 11	6.9		6,104 16	118,267	172	58	3 01	5.1		5,700 22	25	.....	.....	688
1914	6,941 07	127,397	621	19	1 06	5.5		5,084 06	117,741	176	56	2 44	4.3		6,484 43	32	.....	.....	829
1915	6,580 45	199,257	689	25	84	3.3		4,462 54	97,300	188	45	2 05	4.6		10,229 52	39	.....	.....	916
1916	7,145 74	180,735	732	21	83	4.0		4,624 85	186,953	184	84	2 07	2.5		12,262 89	31	.....	.....	947
1917	9,179 72	289,874	822	31	98	3.2		5,651 06	257,868	186	116	2 55	2.2		15,300 91	35	714	21 43	1,043

*Included in Domestic Light.

STATEMENT "D"—Continued

Showing Comparative Revenue, Number of Consumers, Total Kw-hr. Consumption, Domestic and Commercial Light Average Monthly Consumption per Consumer, Average Monthly Bill, and Net Cost per Kw-hr. for the Years 1912, 1913, 1914, 1915, 1916 and 1917, also Average Horse Power Sold and Average Cost per Horse Power per Year to Consumers in 1917.

Municipality	Year	Domestic Light							Commercial Light							Power				
		Revenue	Consumption	Number of Consumers	Av'g Monthly Consumption	Average Monthly Bill	Net Cost per Kw-hr.	Net Cost prior to Hydro	Revenue	Consumption	Number of Consumers	Av'g Monthly Consumption	Average Monthly Bill	Net Cost per Kw-hr.	Net Cost Prior to Hydro	Revenue	Number of Consumers	Average Horse Power	Average Cost per Horse Power	Total Number Consumers
Ingersoll—		$ c.	Kw-hrs.		Kw-hr	$ c.	cents	cents	$ c.	Kw-hrs.		Kw-hr	$ c.	cents	cents	$ c.			$ c.	
	1912	3,073 73	.....	220	.....	.....	.....	8+25	6,648 28	.....	142	.....	.....	.....	8+25	14,430 66	38	.....	.....	400
	1913	3,595 03	43,406	278	14	1 20	8.3		6,048 51	81,724	170	44	3 23	7.4		15,293 44	44	.....	.....	492
	1914	5,085 32	68,342	416	12	1 22	7.5		6,359 72	106,689	194	46	2 32	5.9		12,818 27	48	.....	.....	658
	1915	5,480 52	102,537	497	19	1 00	5.3		5,716 91	139,428	197	60	2 46	4.1		16,251 18	52	.....	.....	746
	1916	6,857 94	127,449	590	20	1 05	5.4		6,540 51	176,757	206	73	2 70	3.7		20,380 90	51	.....	.....	847
	1917	7,465 96	152,188	679	20	98	4.9		6,617 53	194,927	196	81	2 74	3.3		21,747 80	53	967	22 49	928
Waterloo—																				
	1912	4,057 46	.....	239	.....	.....	.....	12+25	4,524 93	.....	112	.....	.....	.....	12+25	11,545 93	35	.....	.....	386
	1913	4,263 66	69,576	321	21	1 27	6.1		5,098 42	87,718	125	62	3 58	5.8		14,970 14	44	.....	.....	490
	1914	4,723 94	85,199	430	19	1 05	5.5		4,825 22	98,924	153	59	2 90	5.		13,282 14	51	.....	.....	634
	1915	5,401 82	106,570	524	19	94	5.1		5,284 87	107,821	162	57	2 80	4.9		15,125 32	53	.....	.....	739
	1916	5,454 60	145,196	592	22	81	3.8		4,750 09	130,418	150	69	2 54	3.6		17,905 45	50	.....	.....	792
	1917	6,562 98	195,770	694	25	85	3.4		5,097 38	144,543	155	55	2 79	3.5		18,773 17	59	1,017	18 46	908
Goderich—																				
	1914	7,197 05	83,805	400	.....	.....	8.6	9	4,196 49	79,874	155	.....	.....	5.3	9	1,240 73	10	.....	.....	565
	1915	6,072 51	92,406	441	18	1 20	6.6		5,066 76	121,559	168	62	2 60	4.1		5,645 26	8	.....	.....	617
	1916	7,086 32	108,654	511	19	1 24	6.5		5,253 15	98,221	159	50	2 68	5.4		5,498 56	9	.....	.....	679
	1917	8,161 85	132,899	539	21	1 29	6.1		5,127 44	99,868	150	54	2 75	5.1		7,079 23	10	252	28 09	699
Dundas—																				
	1913	3,045 85	.....	377	.....	.....	.....	10+25	4,193 27	.....	134	.....	.....	.....	10+25	3,070 40	27	.....	.....	538
	1914	5,349 24	92,168	520	19	99	5.8		4,198 64	119,947	153	69	2 44	3.5		4,305 96	30	.....	.....	703
	1915	6,139 97	128,600	613	19	90	4.8		4,310 96	157,477	160	84	2 29	2.7		5,930 54	37	.....	.....	810
	1916	6,925 46	146,710	673	19	89	4.8		4,714 78	179,151	168	91	2 39	2.6		10,915 58	35	.....	.....	876
	1917	8,335 64	217,654	783	25	95	3.8		4,190 60	154,950	175	75	2 04	2.7		10,284 87	38	659	15 61	996
Paris—																				
	1914	4,766 23	65,037	354	.....	.....	.....	7+10	2,778 09	65,108	142	.....	.....	4.3	8+20	1,419 90	1	.....	.....	497
	1915	5,071 54	87,239	477	17	1 01	5.8		4,063 03	100,259	150	57	2 32	4.1		6,328 33	4	.....	.....	631
	1916	5,877 57	127,382	552	21	96	4.6		3,805 95	96,750	150	53	2 11	3.9		8,974 66	4	.....	.....	706
	1917	6,620 91	155,986	581	23	98	4.2		4,303 71	165,150	161	89	2 31	2.6		8,828 42	5	416	21 22	747

Sarnia—																			
1917	25,655 32	385,770	2,150	15	99	6.6	6	18,724 77	405,824	439	75	3 55	4.4	5—4	33,693 36	58	1,014	33 23	2,647
Preston—																			
1912	4,234 68	.....	341	.....	.....	.....	9+20	5,237 99	.....	131	.....	.....	.....	9+20	15,478 14	21	.....	.....	492
1913	5,477 10	83,852	526	16	1 05	6.5		5,366 77	103,000	151	61	3 18	5.2		21,017 68	28	.....	.....	705
1914	6,520 39	108,257	629	14	90	6.		5,011 15	106,675	165	56	2 64	4.7		21,975 26	29	.....	.....	823
1915	6,615 91	129,896	714	16	82	5.1		4,488 76	118,756	174	58	2 21	3.8		21,698 34	30	.....	.....	918
1916	7,341 15	186,361	785	21	82	3.9		4,779 76	155,325	182	72	2 24	3.1		22,624 37	34	.....	.....	1,001
1917	8,956 89	215,302	843	22	91	4.2		5,733 82	159,885	186	72	2 60	3.5		24,569 60	35	1,353	18 16	1,064
Wallaceburg—																			
1915	4,079 74	56,482	368	.....	.....	7.2	11	4,239 30	63,747	161	.....	.....	6.6	10	87 32	2	.....	.....	531
1916	5,095 45	68,988	438	15	1 05	7.4		4,589 30	67,718	154	22	1 48	6.8		5,866 32	5	.....	.....	593
1917	6,077 20	84,311	493	15	1 09	7.2		4,259 72	92,718	157	49	2 29	4.6		13,218 75	16	415	31 85	662
Simcoe—																			
1915	351 67	5,227	35	.....	.....	6.7		1,386 89	26,852	61	.....	.....	5.1		766 42	8	.....	.....	104
1916	1,857 61	13,238	57	.....	.....	6.5		2,292 28	46,254	84	53	2 63	5.0		1,386 33	12	.....	.....	153
1917	1,346 19	25,468	79	31	1 65	5.3		3,054 71	71,756	103	65	2 74	4.3		1,819 98	16	89	20 45	198
Brampton—																			
1912	3,004 66	.....	409	.....	.....	.....	9+15	2,893 74	.....	104	.....	.....	.....	9+15	3,531 34	12	.....	.....	525
1913	5,617 61	.....	643	.....	.....	.....		3,986 65	.....	138	.....	.....	.....		10,557 72	16	.....	.....	797
1914	6,798 89	142,178	627	18	89	4.9		4,055 99	101,751	174	55	2 17	4.0		10,658 33	21	.....	.....	822
1915	6,860 48	159,435	691	20	86	4.3		4,053 56	116,717	174	56	1 94	3.5		11,624 83	21	.....	.....	886
1916	6,660 66	165,435	722	20	79	4.0		4,013 51	153,542	175	73	1 92	2.6		12,922 72	24	.....	.....	921
1917	7,369 15	244,218	771	27	82	3.0		4,185 97	164,055	162	81	2 09	2.6		18,107 41	27	837	21 65	960
St. Mary's—																			
1912	4,967 16	.....	240	.....	.....	.....	9+15	4,069 20	.....	143	.....	.....	.....	9+15	6,001 30	20	.....	.....	403
1913	3,815 77	44,801	396	12	1 00	8.5		4,553 73	62,486	160	34	2 50	7.3		8,221 72	29	.....	.....	588
1914	4,614 95	67,375	454	13	90	6.7		4,733 33	75,257	161	39	2 46	6.3		10,610 05	30	.....	.....	645
1915	5,073 97	72,819	528	12	86	6.9		4,222 53	75,644	151	40	2 25	5.5		8,379 87	33	.....	.....	712
1916	5,020 33	127,274	563	19	77	3.9		3,161 26	79,768	161	42	1 69	4.0		9,266 74	28	.....	.....	752
1917	5,552 22	140,001	583	20	81	4.0		3,052 62	87,774	161	45	1 58	3.5		8,814 71	30	472	18 67	774
Strathroy—																			
1915	3,380 78	36,200	233	.....	.....	9.3	12+25	4,701 76	50,469	147	.....	.....	9.3	12+25	700 49	5	.....	.....	385
1916	3,318 45	51,197	314	16	1 01	6.5		3,817 38	66,325	152	37	2 12	5.8		2,927 36	8	.....	.....	474
1917	4,355 25	71,509	375	17	1 05	6.1		3,554 88	62,205	153	34	1 94	5.7		4,138 79	11	175	23 65	539
Penetang—																			
1912	1,676 26	.....	101	.....	.....	.....	9	3,836 30	.....	87	.....	.....	.....	9	2,207 51	13	.....	.....	201
1913	1,989 80	27,199	128	19	1 44	7.3		4,511 16	58,111	91	55	4 23	7.7		8,775 95	15	.....	.....	234
1914	1,936 73	35,163	153	21	1 15	5.5		3,064 83	66,489	100	58	2 68	4.6		8,001 69	15	.....	.....	268
1915	2,050 69	42,843	174	22	1 04	4.8		2,676 60	78,657	102	65	2 21	3.4		10,048 08	15	.....	.....	291
1916	2,317 37	49,242	189	23	1 06	4.7		2,706 74	83,448	95	71	2 30	3.2		11,650 03	16	.....	.....	290
1917	2,486 82	62,546	199	27	1 07	4.0		2,677 81	80,783	93	72	2 38	3.3		10,234 73	14	476	21 50	306

STATEMENT "D"—Continued

Showing Comparative Revenue, Number of Consumers, Total Kw-hr. Consumption, Domestic and Commercial Light Average Monthly Consumption per Consumer, Average Monthly Bill, and Net Cost per Kw-hr. for the Years 1912, 1913, 1914, 1915, 1916 and 1917, also Average Horse Power Sold and Average Cost per Horse Power per Year to Consumers in 1917

Municipality	Year	Domestic Light							Commercial Light							Power				Total Number Consumers
		Revenue	Consumption	Number of Consumers	Av'g Monthly Consumption	Average Monthly Bill	Net Cost per Kw-hr.	Net Cost prior to Hydro	Revenue	Consumption	Number of Consumers	Av'g Monthly Consumption	Average Monthly Bill	Net Cost per Kw-hr.	Net Cost prior to Hydro	Revenue	Number of Consumers	Average Horse Power	Average Cost per Horse Power	
Tillsonburg—		$ c.	Kw-hrs.		Kw-hr	$ c.	cents	cents	$ c.	Kw-hrs.		Kw-hr	$ c.	cents	cents	$ c.			$ c.	
	1912	3,233 92	.....	200	.....	.....	.....	11+25	3,350 91	.....	128	.....	.....	.....	11+25	3,283 75	6	.....	.....	334
	1913	2,796 57	29,115	254	10	1 03	9.6		4,677 38	66,049	143	41	2 87	7.8		4,763 15	17	.....	.....	414
	1914	3,367 74	45,937	300	14	1 02	7.3		4,579 37	70,265	160	38	2 52	6.5		6,303 09	16	.....	.....	476
	1915	3,203 51	55,346	348	14	83	5.7		4,236 42	74,564	161	38	2 19	5.7		5,619 15	15	.....	.....	524
	1916	4,009 67	72,975	375	18	1 02	5.5		4,493 41	95,326	188	46	2 14	4.7		5,692 05	17	.....	.....	580
	1917	5,237 69	97,606	400	21	1 13	5.4		4,758 14	96,044	165	45	2 25	5.0		7,935 07	20	451	17 59	585
Petrolia—																				
	1917	3,346 54	54,138	292	15	95	6.1	14+20	3,837 48	61,972	150	34	2 13	6.2	14+20	6,666 29	34	216	30 86	476
Hespeler—																				
	1913	2,189 00	.....	174	.....	.....	.....	10+15	1,684 75	.....	76	.....	.....	.....	10+15	5,044 30	11	.....	.....	261
	1914	2,635 41	34,848	229	14	1 09	7.6		1,934 75	35,979	85	37	2 00	5.4		6,116 27	13	.....	.....	327
	1915	2,787 48	39,580	272	11	90	7.0		2,334 15	39,657	90	38	2 22	5.9		9,017 58	14	.....	.....	376
	1916	3,011 73	54,239	277	17	92	5.5		2,012 28	44,900	84	43	1 93	4.5		11,177 71	12	.....	.....	273
	1917	3,679 79	66,932	312	19	1 04	5.5		2,389 80	53,306	86	52	2 18	4.5		10,166 33	11	394	25 80	409
Prescott—																				
	1914	4,868 75	.....	342	.....	.....	.....	9	3,600 00	.....	122	.....	.....	.....	9	1,099 27	10	.....	.....	474
	1915	4,058 14	67,130	369	16	95	6.0		3,033 62	62,647	145	39	1 89	4.8		3,431 45	11	.....	.....	525
	1916	4,186 96	63,304	380	15	93	6.6		3,611 95	71,794	133	43	2 16	5.0		4,141 90	22	.....	.....	525
	1917	4,865 40	79,202	381	17	1 06	6.1		3,999 55	88,386	134	55	2 49	4.5		5,010 65	14	232	21 60	529
Orangeville—																				
	1917	1,641 42	22,895	144	13	95	7.2	10	1,903 38	32,805	82	33	1 93	5.8	10	2,902 60	4	133	22 58	230
Listowel—																				
	1917	2,500 80	54,842	243	19	86	4.6	10	3,168 19	51,233	125	34	2 11	6.2	10	3,385 58	12	112	30 23	380
Huntsville—																				
	1917	3,597 74	.....	270	.....	.....	.....	10	1,265 03	.....	82	.....	.....	.....	10	13,569 75	3	.....	.....	355

Ridgetown—																			
1916	2,173 64	24,975	174	.....	.....	8.7	10+25	2,838 32	32,594	101	.....	.....	8.7	10+25	740 86	3	.....	.....	278
1917	2,551 69	31,381	205	14	1 12	8.1		2,720 19	26,199	98	22	2 31	10.3		2,245 85	5	96	23 39	308
Elmira—																			
1914	1,908 41	20,875	158	.....	.....	9.5	11.4+10	2,020 81	28,490	65	.....	.....	7.1	11.4+1	1,876 49	8	.....	.....	231
1915	2,059 11	27,576	185	13	1 00	7.5		1,674 44	28,368	85	32	1 85	5.9		2,801 33	10	.....	.....	280
1916	2,211 16	30,817	233	12	88	7.2		1,665 69	35,414	92	33	1 56	4.7		3,635 22	12	.....	.....	338
1917	2,383 62	38,918	238	14	84	6.1		1,854 61	47,159	91	43	1 70	3.9		3,613 47	13	162	22 31	342
Weston—																			
1912	3,979 81	.....	225	.....	.....	.....	7.2+22.5	750 00	.....	15	.....	.....	.....	7.2+22.5	1,674 28	4	.....	.....	344
1913	4,117 20	.....	360	.....	.....	.....		1,475 74	.....	34	.....	.....	.....		6,166 97	6	.....	.....	400
1914	3,741 84	79,766	352	17	80	4.7		1,599 97	26,774	78	40	2 38	6.0		4,958 59	10	.....	.....	440
1915	4,407 36	96,186	441	21	93	4.6		1,305 90	27,564	90	27	1 30	4.7		4,798 33	9	.....	.....	540
1916	5,477 65	135,272	475	25	100	.....		1,407 31	31,898	88	30	1 31	.....		5,202 84	11	.....	.....	574
1917	5,942 00	155,303	542	24	97	3.8		1,467 63	35,800	83	35	1 44	4.1		16,420 90	12	850	19 32	637
Clinton—																			
1914	2,023 70	21,466	179	.....	.....	9.4	10+25	2,028 08	24,696	111	.....	.....	8.2	10+25	1,255 33	7	.....	.....	297
1915	2,930 57	36,598	204	16	1 28	8.2		3,068 63	40,234	110	20	2 31	7.6		2,018 24	6	.....	.....	320
1916	3,161 29	41,986	211	17	1 27	7.5		3,064 37	41,205	112	31	2 30	7.4		2,498 64	7	.....	.....	330
1917	3,220 73	40,965	246	15	1 19	7.9		2,654 30	34,471	115	25	1 92	7.7		2,348 15	7	74	31 73	368
Milton—																			
1913	1,149 28	.....	110	.....	.....	.....		1,212 26	.....	74	.....	.....	.....		6,462 38	5	.....	.....	189
1914	1,961 22	25,649	150	19	1 51	7.6	10	2,226 80	41,015	79	44	2 43	5.4	10	11,325 61	6	.....	.....	235
1915	1,981 80	28,900	170	15	1 03	6.8		1,900 98	41,520	80	44	2 00	4.6		5,364 29	7	.....	.....	257
1916	2,219 28	36,573	197	16	1 01	.....		1,892 21	44,445	84	45	1 93	.....		10,428 79	6	.....	.....	287
1917	2,528 88	50,695	174	24	1 11	5.0		1,863 60	34,859	70	44	2 21	5.4		7,968 76	6	309	25 79	250
Mimico—																			
1913	2,021 06	.....	250	.....	.....	.....		*	.....	*	.....	.....	.....	8+25	795 49	5	.....	.....	255
1914	5,085 16	91,184	462	.....	.....	5.4	8+25	*	3,462	10	.....	.....	5.4		963 64	5	.....	.....	477
1915	5,748 44	105,884	609	17	90	5.4		346 49	6,551	7	40	2 14	5.3		1,042 11	3	.....	.....	619
1916	7,011 08	137,318	621	18	95	5.1		506 44	10,982	31	38	1 76	4.6		1,449 14	8	.....	.....	660
1917	7,400 73	177,916	704	21	93	4.2		883 24	19,361	39	46	2 10	4.6		2,750 59	11	133	20 68	754
Chesley—																			
1917	2,122 78	25,792	185	12	95	8.2	Flat	1,971 03	30,058	81	31	.....	.....	Flat	1,725 38	10	64	26 96	276
Seaforth—																			
1913	2,124 18	24,665	178	.....	.....	8.6		2,876 47	34,789	105	.....	.....	8.3		7,509 99	10	.....	.....	293
1914	2,467 36	37,453	211	16	1 06	6.8	8+25	2,581 30	45,492	112	35	1 98	5.6	8+25	7,707 01	10	.....	.....	333
1915	2,593 70	43,162	238	16	96	6.0		2,724 84	48,840	111	37	2 03	5.6		7,685 52	11	.....	.....	360
1916	3,045 65	51,884	280	17	97	5.9		2,941 03	56,380	110	43	2 22	5.2		9,684 11	12	.....	.....	402
1917	3,437 49	59,670	298	17	96	5.8		2,902 34	49,593	112	37	2 16	5.8		15,125 30	13	401	37 72	423
Mt. Forest—																			
1916	1,967 03	27,337	106	.....	.....	7.2	10	2,420 75	39,059	164	.....	.....	6.2	10	1,739 79	7	.....	.....	277
1917	2,171 91	40,286	176	24	1 28	5.4		2,556 41	37,914	107	30	1 99	6.7		2,533 40	4	136	18 63	287

* Included in Domestic Light.

STATEMENT "D"—Continued

Showing Comparative Revenue, Number of Consumers, Total Kw-hr. Consumption, Domestic and Commercial Light Average Monthly Consumption per Consumer, Average Monthly Bill, and Net Cost per Kw-hr. for the Years 1912, 1913, 1914, 1915, 1916 and 1917, also Average Horse Power Sold and Average Cost per Horse Power per Year to Consumers in 1917

Municipality	Year	Domestic Light							Commercial Light							Power				Total Number Consumers
		Revenue	Consumption	Number of Consumers	Av'g Monthly Consumption	Average Monthly Bill	Net Cost per Kw-hr.	Net Cost prior to Hydro	Revenue	Consumption	Number of Consumers	Av'g Monthly Consumption	Average Monthly Bill	Net Cost per Kw-hr.	Net Cost prior to Hydro	Revenue	Number of Consumers	Average Horse Power	Average Cost per Horse Power	
Palmerston—		$ c.	Kw-hrs.		Kw-hr	$ c.	cents	cents	$ c.	Kw-hrs.		Kw-hr	$ c.	cents	cents	$ c.			$ c.	
	1916	6,102 25	.....	151	.....	.....	.....	Flat	282 57	.....	63	.....	.....	.....	Flat	.....	1	.....	.....	215
	1917	2,506 76	32,672	171	16	1 22	7.7		2,780 86	51,029	71	60	3 26	5.5		1,225 68	2	57	21 50	244
Georgetown—																				
	1913	661 49	.....	160	.....	.....	.....		842 87	.....	50	.....	.....	.....		234 32	5	.....	.....	285
	1914	3,069 02	42,328	242	17	1 27	7.2	10+10	2,362 33	29,544	75	59	3 15	8	10+10	2,976 61	17	.....	.....	334
	1915	2,999 83	43,392	294	14	93	6.9		2,276 41	35,318	97	34	2 20	8.9		8,734 01	16	.....	.....	407
	1916	3,174 63	56,191	306	16	88	5.6		2,101 00	53,129	99	45	1 79	3.3		10,726 24	21	.....	.....	426
	1917	3,370 42	66,131	319	18	90	5.1		2,291 61	51,373	90	45	2 03	4.5		12,714 94	22	454	28 45	431
Durham—																				
	1916	1,518 72	17,091	155	.....	.....	8.9	Flat	1,057 33	13,949	67	.....	.....	8.8	Flat	.....	.....	.....	.....	222
	1917	1,619 86	12,821	170	6	79	12.6		954 19	21,855	71	26	1 12	4.3		30 00	1	.....	.....	242
Fergus—																				
	1915	1,314 03	19,328	114	.....	.....	6.8		2,367 91	37,844	91	.....	.....	6.3	10+25	882 24	7	.....	.....	212
	1916	1,621 27	24,275	149	16	1 03	6.7	10+25	2,111 16	34,953	92	32	2 00	6.0		2,819 21	7	.....	.....	248
	1917	1,822 14	29,351	177	15	93	6.2		2,028 47	37,127	93	33	1 82	5.5		1,959 57	8	67	29 25	278
Tilbury—																				
	1915	979 57	.....	123	.....	.....	.....	10	1,476 53	.....	67	.....	.....	.....	10	.....	.....	.....	.....	190
	1916	1,507 37	21,483	127	14	1 00	6.5		2,071 77	32,612	79	37	2 36	4.5		149 60	2	.....	.....	218
	1917	1,555 59	20,600	132	13	1 00	7.6		2,038 56	27,335	80	29	2 12	7.5		423 28	5	22	19 24	217
Acton—																				
	1913	1,236 50	.....	82	.....	.....	.....	10	1,567 48	.....	62	.....	.....	.....	10	318 77	3	.....	.....	147
	1914	1,463 72	21,192	146	15	.....	6.9		1,496 18	19,878	58	28	2 08	7.5		836 13	5	.....	.....	209
	1915	1,931 11	29,079	183	15	.....	6.6		1,725 73	24,336	53	36	2 59	7.1		1,019 27	5	.....	.....	241
	1916	1,942 11	29,685	185	15	.....	6.5		1,592 62	35,227	60	52	2 35	4.5		1,565 53	7	.....	.....	252
	1917	2,016 13	34,268	200	15	84	5.9		1,600 56	38,244	65	49	2 05	4.2		4,116 69	9	157	26 22	274
Gravenhurst—																				
	1917	2,350 79	39,025	251	13	78	6.0		4,412 55	171,716	69	207	5 33	2.6		4,892 05	9	292	16 76	329

Mitchell—																						
1912	2,964 48	.....		159	.....	.....	.....		2,977 08	.....		79	.....	.....	.....		4,597 03		13	.....	.....	251
1913	2,362 52	.....		179	.....	.....	.....	Flat	2,813 92	.....		85	.....	.....	.....	Flat	6,160 53		16	.....	.....	270
1914	2,470 29	.....		191	.....	.....	.....		2,712 55	.....		100	.....	.....	.....		3,944 91		16	.....	.....	307
1915	2,379 58	.....		190	.....	.....	.....		2,684 01	.....		95	.....	.....	.....		2,333 08		17	.....	.....	292
1916	2,311 80	33,759		218	14	95	6.8		2,677 35	39,211		103	33	2 25	6.8		3,231 56		21	.....	.....	342
1917	2,572 51	41,022		212	16	1 01	6.3		2,774 59	49,323		104	39	2 22	5.6		4,169 05		22	167	24 96	338
Exeter—																						
1917	2,030 27	25,524		170	13	99	7.9	10+25	1,784 53	21,152		87	20	1 71	8.4	10+25	2,363 60		3	92	25 69	260
New Hamburg—																						
1912	1,195 08	.....		124	.....	.....	.....	10	1,423 35	.....		63	.....	.....	.....	10	3,369 05		5	.....	.....	192
1913	1,589 21	.....		142	.....	.....	.....		1,890 72	.....		63	.....	.....	.....		5,792 20		8	.....	.....	213
1914	1,779 90	23,010		170	12	89	7.7		1,403 56	19,404		68	25	1 78	7.2		5,209 51		6	.....	.....	244
1915	1,888 04	33,913		187	16	88	4.9		1,273 38	23,041		70	27	1 54	5.5		2,825 57		4	.....	.....	261
1916	1,816 44	37,109		196	16	79	5.5		1,211 25	26,492		70	32	1 39	4.6		1,646 90		4	.....	.....	270
1917	2,052 95	40,407		184	18	93	5.1		1,481 03	34,156		69	41	1 79	4.3		4,299 65		9	188	22 87	262
Dresden—																						
1915	1,093 68	.....		185	.....	.....	.....		1,223 25	.....		109	.....	.....	.....		.....		.....	.....	.....	294
1916	1,995 51	26,473		197	12	87	7.5	Flat	1,986 21	30,352		106	24	1 54	6.5	Flat	.....		.....	.....	.....	303
1917	2,158 62	28,977		206	12	87	7.4		1,983 96	28,874		105	23	1 57	6.9		102 94		1	5	20 58	312
Forest—																						
1917	.....	.....		260	.....	.....	.....	10	.....	.....		104	.....	.....	.....		.....		6	.....	.....	370
Victoria Harbor—																						
1915	105 79	.....		56	.....	.....	.....	Flat	117 85	.....		34	.....	.....	.....	Flat	.....		.....	.....	.....	90
1916	642 29	.....		65	.....	.....	.....		1,171 37	.....		31	.....	.....	.....		.....		.....	.....	.....	96
1917	666 04	9,230		69	11	80	7.2		1,130 48	11,721		38	26	2 48	9.6		.....		.....	.....	.....	107
Bleuheim—																						
1917	2,256 70	30,314		212	12	89	7.4	10	2,113 67	28,786		84	29	2 09	7.3	10	47 40		3	.....	.....	299
Harriston—																						
1917	1,556 49	18,184		132	12	98	8.6	10	1,935 38	21,868		68	27	2 37	8.8	10	2,686 93		6	78	34 45	206
Pt. Dalhousie—																						
1913	3,742 54	.....		238	.....	.....	.....		*	.....		*	.....	.....	.....		347 28		3	.....	.....	241
1914	3,656 01	.....		240	.....	.....	.....	Flat	*	.....		10	.....	.....	.....	Flat	429 54		3	.....	.....	253
1915	3,608 70	.....		250	.....	.....	.....		.....	.....		10	.....	.....	.....		252 12		2	.....	.....	262
1916	2,868 05	.....		330	.....	.....	.....		782 99	.....		32	.....	.....	.....		339 12		8	.....	.....	370
1917	3,249 37	.....		330	.....	.....	.....		881 01	.....		32	.....	.....	.....		321 67		8	.....	.....	370
Caledonia—																						
1913	404 60	.....		17	.....	.....	.....		*	.....		16	.....	.....	.....		470 34		1	.....	.....	34
1914	880 54	.....		21	.....	.....	.....	None	*	.....		32	.....	.....	.....	None	188 54		1	.....	.....	54
1915	265 62	4,618		24	16	98	5.4		950 38	18,325		33	47	2 44	5.4		138 42		1	.....	.....	58
1916	263 39	4,800		27	16	86	5.5		777 38	20,000		37	47	1 85	4.		519 82		3	.....	.....	67
1917	283 63	5,500		33	13	79	5.2		786 20	22,800		38	50	1 72	3.4		777 85		4	48	16 21	.....

*Included in Domestic Light.

STATEMENT "D"—Continued

Showing Comparative Revenue, Number of Consumers, Total Kw-hr. Consumption, Domestic and Commercial Light Average Monthly Consumption per Consumer, Average Monthly Bill, and Net Cost per Kw-hr. for the Years 1912, 1913, 1914, 1915, 1916 and 1917, also Average Horse Power Sold and Average Cost per Horse Power per Year to Consumers in 1917

Municipality	Year	Domestic Light							Commercial Light							Power				Total Number Consumers
		Revenue	Consumption	Number of Consumers	Av'g Monthly Consumption	Average Monthly Bill	Net Cost per Kw-hr.	Net Cost prior to Hydro	Revenue	Consumption	Number of Consumers	Av'g Monthly Consumption	Average Monthly Bill	Net Cost per Kw-hr.	Net Cost prior to Hydro	Revenue	Number of Consumers	Average Horse Power	Average Cost per Horse Power	
Norwich—		$ c.	Kw-hrs.		Kw-hr	$ c.	cents	cents	$ c.	Kw-hrs.		Kw-hr	$ c.	cents	cents	$ c.			$ c.	
	1912	862 17	.....	128	.....	.....	.....	10+25	674 48	.....	64	.....	.....	.....	10+25	263 93	2	.....	.....	194
	1913	1,926 78	28,172	166	15	1 09	6.8		1,162 98	17,917	76	20	1 38	6.5		1,978 55	3	.....	.....	245
	1914	2,168 13	35,578	198	16	99	6.2		995 16	20,690	84	22	1 04	6.4		1,893 72	3	.....	.....	285
	1915	2,529 91	37,082	228	16	99	6.2		1,075 79	25,880	80	26	1 09	4.2		2,169 31	5	.....	.....	313
	1916	2,319 58	49,858	234	18	84	4.7		1,168 34	24,909	87	25	1 16	4.7		2,642 97	6	.....	.....	327
	1917	8,132 02	55,968	356	16	.....	.....		1,198 97	24,854	82	25	1 19	4.8		4,116 38	10	137	30 05	448
New Toronto—																				
	1914	653 50	11,947	100	.....	.....	7.0	8+25	.....	.....	4	.....	.....	7.0	8+25	.....	1	.....	.....	105
	1915	1,416 10	19,520	153	.....	.....	5.5		.....	.....	8	.....	.....	5.5		2,140 36	2	.....	.....	163
	1916	1,571 03	29,162	210	.....	.....	5.4		143 32	5,956	10	.....	.....	5.4		9,744 31	4	.....	.....	224
	1917	2,451 49	46,080	320	14	77	5.3		566 42	7,680	22	40	2 95	7.4		30,726 27	8	1,554	19 77	350
Waterford—																				
	1915	685 22	.....	75	.....	.....	.....		546 08	.....	40	.....	.....	.....		.....	.....	.....	.....	115
	1916	1,112 28	14,220	99	14	1 08	7.8	10	796 50	9,827	42	20	1 62	8.1	10	1,007 74	2	.....	.....	143
	1917	1,369 35	17,445	100	15	1 14	7.8		807 28	11,938	42	24	1 21	6.8		4,030 85	1	85	47 54	143
Shelburne—.																				
	1917	1,625 28	28,451	133	18	1 02	5.7	10	1,362 06	23,807	74	27	1 53	5.7	10	620 14	4	28	22 15	210
Elora—																				
	1915	1,044 49	14,009	89	.....	.....	7.4	10+25	1,820 07	25,431	60	.....	.....	7.1	10+25	197 78	1	.....	.....	150
	1916	1,253 03	20,500	105	18	1 08	6.1		1,828 25	27,945	63	38	2 48	6.5		972 12	2	.....	.....	170
	1917	1,400 12	31,600	123	23	1 02	4.4		1,937 30	40,200	64	52	2 52	4.8		3,640 75	2	120	30 34	189
Hagersville—																				
	1913	81 92	.....	3	.....	.....	.....		*	.....	24	.....	.....	.....		746 85	3	.....	.....	30
	1914	1,222 23	16,053	70	.....	.....	5.4	None	*	6,446	60	.....	.....	5.4	None	2,679 08	3	.....	.....	133
	1915	1,172 85	23,213	114	21	1 06	5.1		1,592 59	22,676	73	28	1 99	5.2		2,434 62	3	.....	.....	190
	1916	1,606 80	30,025	127	21	1 11	5.4		1,343 82	27,840	69	32	1 58	4.8		2,527 92	4	.....	.....	200
	1917	1,602 64	29,611	138	19	1 01	5.4		1,252 54	34,696	68	42	1 54	3.6		2,289 37	4	88	26 02	210

Winchester—																					
1914	1,672 09	.....	103	.....	.....	.....		1,300 00	.....	50	.....	.....	.....		.....	.....	.....	.....			153
1915	1,698 40	28,610	120	21	1 27	5.9	15	1,336 85	17,550	30	50	2 23	7.6	15	.....	1	.....	.....			171
1916	1,812 29	36,931	135	24	1 18	5.4		1,364 47	21,999	46	38	2 37	6.2		227 52	1	.....	.....			182
1917	2,330 67	36,311	162	20	1 31	6.4		1,546 53	17,564	47	31	2 58	8.8		438 22	1	20	21 91			210
Pt. Credit—																					
1913	1,963 22	.....	93	.....	.....	.....		*	.....	21	.....	.....	.....		848 59	2	.....	.....			116
1914	2,461 42	41,862	125	.....	.....	6.0	None	*	.....	35	.....	.....	6.0	None	308 88	2	.....	.....			162
1915	1,975 29	36,484	141	23	1 24	5.4		587 11	17,934	33	44	1 18	3.3		236 47	3	.....	.....			177
1916	1,781 49	44,251	145	26	1 04	4.0		464 02	13,800	33	35	1 17	3.3		257 40	3	.....	.....			181
1917	1,822 36	42,378	162	23	98	4.3		452 84	12,833	33	33	1 14	3.5		246 63	3	23	10 72			198
Arthur—																					
1917	854 24	9,307	60	13	1 19	9.1	10+25	922 38	9,585	51	17	1 51	9.6	10+25	177 21	2	20	.....			113
Beaverton—																					
1915	1,484 62	.....	131	.....	.....	.....		1,149 67	.....	56	.....	.....	.....		456 74	5	.....	.....			192
1916	1,417 39	20,685	131	13	90	6.9	Flat	1,065 23	17,594	60	25	1 53	6.1	Flat	383 45	6	.....	.....			197
1917	1,482 00	20,945	148	13	89	7.1		1,041 84	18,162	51	28	1 58	5.7		650 02	7	36	18 06			206
Tavistock—																					
1917	1,155 03	.....	80	.....	.....	.....	10	1,396 92	.....	64	.....	.....	.....	10	1,915 65	2	.....	.....			146
Markdale—																					
1917	1,241 47	.....	106	.....	.....	.....	10	1,105 58	....	68	.....	.....	.....	10	718 89	3	.....	.....			177
Stayner—																					
1913	158 48	.....	120	.....	.....	.....		116 91	.....	30	.....	.....	.....		301 86	2	.....	.....			152
1914	909 58	9,200	108	7	66	9.9		747 93	11,000	56	20	1 45	6.7		1,699 08	2	.....	.....			156
1915	995 47	11,845	106	9	78	8.4	Flat	933 55	13,725	56	20	1 39	6.8	Flat	1,694 94	2	.....	.....			164
1916	1,012 15	11,995	115	9	76	9.2		997 39	12,955	65	18	1 37	7.7		1,835 29	3	.....	.....			183
1917	1,109 46	13,883	124	10	78	7.9		957 56	17,169	59	23	1 29	5.6		1,009 88	5	44	22 95			188
Cannington—																					
1915	1,599 40	.....	135	.....	.....	.....		1,120 04	.....	65	.....	.....	.....		464 26	6	.....	.....			206
1916	1,720 25	25,049	150	15	1 00	6.9	12.5	973 63	13,808	73	17	1 17	7.1	12.5	462 47	7	.....	.....			230
1917	2,040 39	29,390	137	17	1 19	6.9		936 22	19,722	70	23	1 10	4.7		495 80	7	45	11 02			214
Milverton—																					
1917	785 01	11,116	65	14	1 01	7.1	None	1,200 09	17,892	59	25	1 69	6.7	None	2,899 56	4	80	36 24			128
Dutton—																					
1915	318 85	3,970	108	.....	.....	8.0		206 59	2,818	43	.....	.....	7.3		.....	1	.....	.....			152
1916	1,353 04	17,243	112	13	1 03	7.8	Flat	960 27	13,256	52	23	1 34	7.2	Flat	135 31	1	.....	.....			165
1917	1,381 08	17,710	114	13	1 02	7.8		967 98	15,954	54	26	1 49	6.7		73 76	1	10	.....			169

*Included in Domestic Light.

STATEMENT "D"—Continued

Showing Comparative Revenue, Number of Consumers, Total Kw-hr. Consumption, Domestic and Commercial Light Average Monthly Consumption per Consumer, Average Monthly Bill, and Net Cost per Kw-hr. for the Years 1912, 1913, 1914, 1915, 1916 and 1917, also Average Horse Power Sold and Average Cost per Horse Power per Year to Consumers in 1917

Municipality	Year	Domestic Light							Commercial Light							Power				Total Number Consumers
		Revenue	Consumption	Number of Consumers	Av'g Monthly Consumption	Average Monthly Bill	Net Cost per Kw-hr.	Net Cost prior to Hydro	Revenue	Consumption	Number of Consumers	Av'g Monthly Consumption	Average Monthly Bill	Net Cost per Kw-hr.	Net Cost prior to Hydro	Revenue	Number of Consumers	Average Horse Power	Average Cost per Horse Power	
Pt. Stanley—		$ c.	Kw-hrs.		Kw-hr	$ c.	cents	cents	$ c.	Kw-hrs.		Kw-hr	$ c.	cents	cents	$ c.			$ c.	
	1912	897 02	.....	122	.....	.....	.....		1,106 63	.....	40	.....	.....	.....		1,314 70	3	.....	.....	165
	1913	1,828 06	.....	182	.....	.....	.....	Flat	1,771 70	.....	60	.....	.....	.....	Flat	2,418 00	9	.....	.....	251
	1914	2,066 41	.....	229	.....	.....	.....		1,753 60	.....	72	.....	.....	.....		2,170 83	12	.....	.....	313
	1915	2,498 57	.....	274	.....	.....	.....		1,736 42	.....	73	.....	.....	.....		2,064 76	9	.....	.....	356
	1916	2,956 97	.....	308	.....	.....	.....		1,551 37	.....	72	.....	.....	.....		1,985 92	11	.....	.....	391
	1917	3,386 56	.....	323	.....	.....	.....		1,714 56	.....	67	.....	.....	.....		3,174 23	6	.....	.....	396
Chesterville—																				
	1914	530 13	7,672	68	.....	.....	6.9	None	791 67	10,176	35	.....	.....	7.7	None	.....	.....	.....	.....	103
	1915	919 27	12,663	85	14	1 00	7.2		1,187 54	12,104	49	21	2 06	9.8		.....	.....	.....	.....	134
	1916	1,490 99	15,779	89	17	1 43	9.4		1,240 56	15,179	47	26	2 12	8.2		177 55	1	.....	.....	137
	1917	1,505 16	18,395	87	17	1 42	8.2		1,226 80	15,360	45	28	2 18	7.9		2,134 49	2	53	40 27	134
Ayr—																				
	1915	892 63	16,031	79	.....	.....	5.5		773 08	9,477	35	.....	.....	8.1		348 78	1	.....	.....	115
	1916	1,084 46	12,314	83	13	1 12	8.8	12.5+25	804 00	12,960	48	26	1 61	6.2	12.5+25	393 39	2	.....	.....	133
	1917	1,124 21	14,228	92	14	1 08	7.9		857 27	12,441	48	23	1 50	6.9		966 44	2	32	30 20	142
Thamesville—																				
	1915	378 79	.....	107	.....	.....	.....	9	283 36	.....	53	.....	.....	.....	11	.....	.....	.....	.....	160
	1916	1,729 79	19,061	137	13	1 18	9.1		1,021 17	13,087	59	20	1 52	7.8		.....	.....	.....	.....	196
	1917	1,829 34	21,168	145	13	1 08	8.6		949 80	9,697	70	12	1 22	9.8		.....	.....	.....	.....	215
Waterdown—																				
	1912	774 40	.....	41	.....	.....	.....		340 00	.....	20	.....	.....	.....		614 42	2	.....	.....	63
	1913	1,003 09	.....	70	.....	.....	.....		361 20	.....	34	.....	.....	.....		917 65	2	.....	.....	106
	1914	1,054 13	13,360	71	16	1 25	7.9	None	535 83	8,321	34	20	1 31	6.5	None	1,011 38	5	.....	.....	110
	1915	1,202 41	18,017	84	19	1 30	6.7		567 65	8,493	30	23	1 48	6.7		1,207 80	7	.....	.....	121
	1916	1,218 86	18,622	93	18	1 15	6.5		575 10	8,944	32	24	1 55	6.4		1,149 78	6	.....	.....	131
	1917	1,317 48	18,025	101	15	1 13	7.3		529 70	7,887	31	21	1 43	6.7		1,232 89	4	85	14 50	136

Hensall—																		
1917	1,038 57	10,872	89	11	1 06	9.6	12+20	610 79	7,046	36	18	1 54	8.7	12+20	81 39	2	.....	127
Bolton—																		
1915	624 86	6,563	59	.....	.....	9.5		553 80	7,298	42	.....	.....	7.6		313 74	3	.....	104
1916	926 86	9,322	70	12	1 20	9.9	10 + 25	882 26	13,081	36	28	1 88	6.7	10 + 25	3,947 32	4	.....	110
1917	1,191 92	12,829	78	13	1 27	9.3		698 70	12,534	44	26	1 46	5,6		2,856 39	5	117	24 41	127
West Lorne—																		
1917	578 98	.....	54	.....	.....	.....	Flat	602 00	.....	40	.....	.....	.....	Flat	.....	.....	.....	.....	94
Dundalk—																		
1916	924 30	.....	88	.....	.....	.....	Flat	960 58	.....	63	.....	.....	.....	Flat	618 52	2	.....	.....	153
1917	926 52	12,065	80	12	92	7.7		872 71	12.718	76	15	1 05	6.9		876 00	4	27	.....	160
Bothwell—																		
1915	230 61	.....	68	.....	.....	.....	Flat	191 21	.....	32	.....	.....	.....		.....	.....	.....	.....	100
1916	928 16	8,662	78	10	1 03	10.7		768 57	8,613	52	17	1 46	8.9	Flat	.....	.....	.....	.....	130
1917	1,085 92	9,890	86	10	1 05	10.9		825 43	8,877	45	16	1 53	9.3		1,500 00	2	.....	.....	133
Lucan—																		
1915	824 07	.....	87	.....	.....	.....		687 37	.....	39	.....	.....	.....		18 66	3	.....	.....	129
1916	1,124 73	12,047	98	11	1 00	9.3		857 11	8,370	42	17	1 78	10.2		159 67	7	.....	.....	147
1917	1,283 01	16,701	103	14	1 07	7.7		870 97	7,243	39	15	1 82	12.0		2,756 92	10	90	30 63	142
Rodney—																		
1917	587 46	.....	57	.....	.....	.....	None	665 84	.....	41	.....	.....	.....	None	.....	.....	.....	.....	98
Grand Valley—																		
1917	714 68	7,474	55	11	1 08	9.6	10+25	964 59	10,065	54	16	1 50	9,6	10+25	.....	1	.....	.....	110
Woodbridge—																		
1915	367 49	4,878	42	.....	.....	7.5	None	443 53	4,911	33	.....	.....	9.0	None	498 44	2	.....	.....	77
1916	507 10	7,059	58	13	89	7.0		556 82	7,048	33	17	1 40	7.9		2,221 33	7	.....	.....	98
1917	698 53	10,180	69	14	92	6.9		579 56	13,356	35	33	1 42	4.3		2,384 67	6	74	32 25	110
Ailsa Craig—																		
1916	579 57	6,270	51	.....	.....	9.2	None	213 46	1,910	11	.....		11.2	None	15 57	1	.....	.....	63
1917	776 93	7,584	55	12	1 22	10.2		255 84	932	19	.....		11.2		1,591 95	4	40	39 80	78
Creemore—																		
1915	699 81	6,399	78	.....	.....	10.9	Flat	937 84	7,653	59	.....	.....	12.2	Flat	939 20	1	.....	.....	138
1916	922 41	9,678	78	14	1 00	7.2		1,041 90	8,745	44	15	1 72	11.9		1,151 96	2	.....	.....	132
1917	973 25	9,257	69	11	1 11	10.5		1,124 74	11,105	55	19	1 91	10.1		1,210 57	3	54	22 42	127
Coldwater—																		
1913	405 43	.....	48	.....	.....	.....	None	330 25	.....	32	.....	.....	.....	None	247 19	1	.....	.....	81
1914	853 56	12,466	62	19	1 30	6.8		589 85	10,382	39	24	1 40	5.7		617 26	2	.....	.....	103
1915	874 94	16,706	66	21	1 15	5.3		703 35	13,686	37	31	1 54	5.1		363 88	2	.....	.....	105
1916	977 62	16,599	70	20	1 20	5.9		848 82	16,644	39	36	1 85	5.1		247 91	2	.....	.....	111
1917	984 41	22,186	75	25	1 09	4,4		640 85	15,939	39	34	1 37	4.0		182 39	1	20	.....	115

STATEMENT "D"—Continued

Showing Comparative Revenue, Number of Consumers, Total Kw-hr. Consumption, Domestic and Commercial Light Average Monthly Consumption per Consumer, Average Monthly Bill, and Net Cost per Kw-hr. for the years 1912, 1913, 1914, 1915, 1916 and 1917, also Average Horse Power Sold and Average Cost per Horse Power per Year to Consumers in 1917

Municipality	Year	Domestic Light							Commercial Light							Power				Total Number Consumers
		Revenue	Consumption	Number of Consumers	Av'g Monthly Consumption	Average Monthly Bill	Net Cost per Kw-hr.	Net Cost prior to Hydro	Revenue	Consumption	Number of Consumers	Av'g Monthly Consumption	Average Monthly Bill	Net Cost per Kw-hr.	Net Cost prior to Hydro	Revenue	Number of Consumers	Average Horse Power	Average Cost per Horse Power	
Wyoming—		$ c.	Kw-hrs.		Kw-hr	$ c.	cents	cents	$ c.	Kw-hrs.		Kw-hr	$ c.	cents	cents	$ c.			$ c.	
	1917	658 99	9,309	56	12	98	7.1	None	581 47	8,065	34	20	1 43	7.1		.....	.....	.....	.....	90
Embro—																				
	1915	400 50	.....	65	.....	.....	.....	None	489 67	.....	30	.....	.....	.....	None	.....	.....	.....	.....	95
	1916	633 95	5,690	58	7	85	11.1		598 41	10,333	29	29	1 66	5.8		155 54	2	.....	.....	89
	1917	664 53	5,391	60	8	94	12.3		522 37	6,322	31	18	1 45	8.2		132 76	2	.....	.....	93
Flesherton—																				
	1916	568 76	.....	73	.....	.....	.....	None	423 83	.....	30	.....	.....	.....	None	.....	.....	.....	.....	103
	1917	621 93	8,364	70	9	74	7.4		387 92	7,545	31	20	1 04	5.1		.....	.....	.....	.....	101
Woodville—																				
	1915	324 34	.....	35	.....	.....	.....	12.5	563 68	.....	28	.....	.....	.....	12.5	1,149 17	3	.....	.....	66
	1916	496 52	5,049	41	9	92	9.8		512 07	6,618	24	21	1 62	7.7		1,185 54	3	.....	.....	68
	1917	689 70	7,741	51	14	1 25	8.9		591 94	8,512	23	31	2 15	7.0		1,072 28	3	50	21 45	77
Chatsworth—																				
	1917	379 96	4,256	37	10	87	8.9	None	253 75	3,980	23	14	92	6.4		.....	.....	.....	.....	60
Baden—																				
	1913	884 11	.....	75	.....	.....	.....	None	*	.....	*	.....	.....	.....	None	2,242 77	4	.....	.....	79
	1914	1,247 81	6,920	82	7	75	10.0		*	5,547	*	7	75	10.0		4,580 23	4	.....	.....	86
	1915	938 33	12,729	72	13	98	7.4		*	.....	*	13	98	7.4		4,588 87	4	.....	.....	76
	1916	808 21	8,824	84	16	86	5.5		*	5,772	*	16	86	5.5		5,059 33	5	.....	.....	89
	1917	842 09	10,066	58	12	98	8.4		*	5,827	23	12	98	8.4		5,243 91	5	175	29 96	86
Brechin—																				
	1915	148 83	.....	13	.....	.....	.....	None	407 78	.....	14	.....	.....	.....	None	1,007 59	1	.....	.....	28
	1916	172 42	1,836	16	11	1 02	9.4		404 70	5,370	20	28	2 00	7.5		1,153 32	1	.....	.....	37
	1917	194 03	2,131	19	10	90	9.1		528 24	7,364	20	31	2 20	7.1		1,285 50	2	32	40 17	41

Beachville—																				
1913	562 97	.....	45	.....	.....	.....	None	*	.....	*	.....	.....	.....	None	5,993 81	4	.....	.....	49
1914	587 33	4,422	45	.....	.....	7.9		*	2,988	*	.....	.....	7.9		5,368 04	4	.....	.....	49
1915	363 33	5,356	37	11	74	6.8		296 37	4,847	12	34	2 05	6.1		5,593 15	4	.....	.....	53
1916	400 81	5,891	42	13	84	6.8		263 62	3,872	12	27	1 83	6.8		5,393 02	3	.....	.....	57
1917	419 11	6,317	44	12	79	6.6		286 14	5,597	12	39	1 99	5.1		6,354 25	3	428	14 85	59
Burford—																				
1916	577 69	9,005	64	.....	.....	6.4	Flat	380 44	7,569	30	.....	.....	5.0	Flat	519 72	1	.....	.....	95
1917	834 73	11,519	79	13	98	7.2		837 51	13,262	34	34	2 18	6.3		549 31	1	25	21 98	114
Burgessville—																				
1917	359 41	5,299	29	.....	.....	.....	None	115 15	1,506	9	.....	.....	.....		815 36	1	88	.....	39
Comber—																				
1915	214 87	3,181	33	.....	.....	6.8	None	274 49	3,497	33	.....	.....	7.8	None	.....	.....	.....	.....	66
1916	538 57	5,894	37	14	1 32	9.1		678 58	6,729	37	15	1 50	10.1		.....	.....	.....	.....	74
1917	541 45	6,542	39	14	1 19	8.3		689 59	7,245	36	17	1 60	9.5		.....	.....	.....	.....	75
Delaware—																				
1915	146 16	.....	22	.....	.....	.....	None	114 18	.....	10	.....	.....	.....	None	.....	1	.....	.....	33
1916	354 60	2,835	23	11	1 35	12.5		141 64	1,823	12	14	1 07	7.8		.....	.....	.....	.....	35
1917	260 94	2,596	24	9	91	10.1		203 25	1,947	12	14	1 21	10.5		.....	.....	.....	.....	36
Dorchester—																				
1915	579 23	6,840	61	.....	.....	8.5	None	309 88	4,806	18	.....	.....	6.4	None	287 95	2	.....	.....	81
1916	613 03	7,329	61	10	1 84	8.4		275 82	4,879	16	19	1 35	5.7		667 93	2	.....	.....	79
1917	768 08	10,046	70	13	98	7.6		177 25	2,583	11	17	1 14	6.9		314 48	2	.....	.....	83
Drumbo—																				
1915	304 49	.....	40	.....	.....	.....	None	288 99	.....	30	.....	.....	.....	None	159 85	1	.....	.....	71
1916	340 75	4,481	35	10	77	7.5		277 43	3,718	22	15	1 12	7.6		116 57	.....	.....	.....	57
1917	350 11	4,298	38	10	81	8.1		301 20	4,084	22	15	1 14	7.4		.....	.....	.....	.....	60
Elmvale—																				
1913	284 34	.....	52	.....	.....	.....	None	358 60	.....	52	.....	.....	.....	None	.....	1	.....	.....	105
1914	673 18	6,856	57	10	1 03	9.9		896 11	15,402	48	25	1 49	5.8		438 38	2	.....	.....	107
1915	704 12	7,728	78	10	87	9.1		778 93	16,193	64	25	1 16	3.9		1,186 44	2	.....	.....	144
1916	816 74	10,562	81	11	85	7.7		736 74	18,644	62	25	97	5.0		1,043 96	3	.....	.....	146
1917	881 20	11,868	89	11	86	7.4		696 79	13,041	61	19	95	5.3		810 96	3	.....	.....	153
Granton																				
1917	484 69	5,782	42	12	96	8.4	None	176 93	1,774	16	.....	.....	10.0		333 85	1	.....	.....	59
Highgate																				
1917	416 49	4,447	41	9	85	9.4	None	467 76	4,373	21	17	1 86	10.7		.....	1	.....	.....	63
Holstein																				
1917	238 48	2,366	26	8	86	10.1	None	209 74	2,672	15	15	1 17	7.9		.....	.....	.....	.....	41

*Included in Domestic Light.

STATEMENT "D"—Concluded

Showing Comparative Revenue, Number of Consumers, Total Kw-hr. Consumption, Domestic and Commercial Light Average Monthly Consumption per Consumer, Average Monthly Bill, and Net Cost per Kw-hr. for the Years 1912, 1913, 1914, 1915, 1916 and 1917, also Average Horse Power Sold and Average Cost per Horse Power per Year to Consumers in 1917

Municipality	Year	Domestic Light							Commercial Light							Power				Total Number Consumers
		Revenue	Consumption	Number of Consumers	Av'g Monthly Consumption	Average Monthly Bill	Net Cost per Kw-hr.	Net Cost prior to Hydro	Revenue	Consumption	Number of Consumers	Av'g Monthly Consumption	Average Monthly Bill	Net Cost per Kw-hr.	Net Cost prior to Hydro	Revenue	Number of Consumers	Average Horse Power	Average Cost per Horse Power	
Lambeth—		$ c.	Kw-hrs.		Kw-hr	$ c.	cents	cents	$ c.	Kw-hrs.		Kw-hr	$ c.	cents	cents	$ c.			$ c.	
	1915	344 47	2,991	49	.....	.....	11.5	None	119 00	1,042	9	.....	.....	11.4	None	559 82	1	.....	.....	59
	1916	575 65	6,880	54	11	91	8.4		208 96	.....	13	.....	1 58	8.3		249 36	1	.....	.....	68
	1917	721 51	7,655	65	11	1 04	9.4		252 56	2,577	13	16	1 62	9.8		182 50	1	.....	.....	79
Lynden—																				
	1916	254 76	3,500	24	.....	.....	7.3	None	227 57	4,430	10	.....	.....	5.1	None	650 38	1	.....	.....	35
	1917	272 49	7,498	24	.....	.....	7.3		213 11	7,576	11	.....	.....	5.1		2,912 96	1	84	34 68	36
Mt. Brydges—																				
	1915	333 43	.....	45	.....	.....	.....	None	494 02	.....	15	.....	.....	.....	None	517 50	1	.....	.....	61
	1916	644 75	5,058	55	8	1 07	12.7		170 46	3,106	15	17	95	5.5		760 58	2	.....	.....	72
	1917	540 17	6,481	58	9	81	8.3		344 16	3,481	20	17	1 69	9.9		627 07	2	27	23 22	80
Otterville																				
	1917	537 88	.....	42	.....	.....	.....	None	290 37	.....	23	.....	.....	.....		47 44	1	.....	.....	66
Plattsville—																				
	1915	551 39	6,061	56	.....	.....	9.1	None	477 71	5,091	20	.....	.....	9.4	None	1,128 27	4	.....	.....	80
	1916	666 30	7,422	60	11	96	9.0		580 62	5,900	22	14	1 35	9.8		1,436 62	3	.....	.....	85
	1917	670 35	7,220	60	10	93	9.3		583 58	6,714	22	25	2 21	8.7		768 37	2	37	20 77	84
Princeton—																				
	1915	440 42	.....	30	.....	.....	.....	None	81 57	.....	15	.....	.....	.....	None	.....	.....	.....	.....	45
	1916	657 80	7,739	44	17	1 48	8.5		127 81	1,278	11	8	83	10.6		192 92	.....	.....	.....	55
	1917	789 51	8,412	46	16	1 46	9.4		178 43	1,290	12	9	1 24	.....		.....	.....	.....	.....	58
Pt. McNicoll—																				
	1915	415 03	6,037	60	.....	.....	6.8	None	311 20	6,542	26	.....	.....	4.7	None	.....	.....	.....	.....	86
	1916	618 82	9,450	66	12	82	6.5		301 92	4,738	21	17	1 07	6.4		7 37	1	.....	.....	88
	1917	829 39	.....	78	.....	.....	.....		381 25	.....	21	.....	.....	.....		77 41	1	.....	.....	100

Rockwood—																			
1913	230	27	.....	48	.....	.....	.....	None	*	.....	9	.....	.....	.....	None	480	82	1	.....	.....	58
1914	848	55	7,824	54	13	1	38	8.8	*	.....	7	.....	.....	8.8		1,542	01	3	.....	.....	64
1915	731	97	9,500	65	13	1	03	7.7	251	27	3,300	10	32	2	46	7.7		907	57	3	.....	.....	78
1916	733	66	11,263	72	14		89	6.5	388	05	5,930	11	47	3	08	6.4		903	57	5	.....	.....	87
1917	795	54	12,740	77	14		90	6.2	380	90	6,061	15	39	2	44	6.3		1,097	05	3	59	18	60	95
Sunderland—																							
1915	794	83	.....	57	.....	.....	.....		939	85	.....	36	.....	.....	.....			.....	.....	.....	.....		93
1916	752	64	7,714	61	11	1	06	9.8	840	22	9,644	37	45	1	92	9.0	12.5	211	86	1	.....	.....	99
1917	858	64	10,369	58	15	1	29	8.3	745	91	10,108	27	26	1	94	7.4		731	14	2	34	21	50	87
St. George—																							
1915	203	23	.....	39	.....	.....	.....	None	139	16	.....	14	.....	.....	.....		None	311	30	1	.....	.....	54
1916	832	25	11,483	56	20	1	46	7.2	474	38	7,031	24	31	2	08	6.7		583	52	2	.....	.....	82
1917	1,046	91	15,314	60	22	1	50	6.8	478	96	8,067	23	29	1	74	5.9		642	64	3	35	18	36	86
Thorndale—																							
1914	446	27	2,787	34	.....	.....	7.8	None	.....		2,989	18	.....	.....	7.8		None	329	27	1	.....	.....	53
1915	299	37	2,816	32	7		76	10.6	374	09	3,653	20	16	1	64	10.2		542	53	1	.....	.....	53
1916	328	67	3,597	33	9		84	9.1	403	01	3,709	21	16	1	64	10.9		459	79	1	.....	.....	55
1917	382	95	4,654	37	11		91	8.2	413	03	4,642	22	17	1	56	8.9		475	53	1	24	19	81	60
Thamesford—																							
1914	393	49	3,686	44	.....	.....	10.9	None	323	92	3,445	26	.....	.....	9.4		None	946	32	2	.....	.....	72
1915	574	34	6,676	59	9		78	8.6	481	78	5,886	26	12	1	20	8.2		423	21	2	.....	.....	87
1916	642	21	7,540	64	10		87	8.5	537	42	6,768	29	20	1	63	7.9		268	23	2	.....	.....	95
1917	646	83	6,973	63	9		86	9.3	588	64	6,827	28	20	1	75	8.6		682	43	3	41	16	64	94
Waubaushene—																							
1915	516	34	7,296	49	.....	.....	7.0	None	220	50	2,979	15	.....	.....	7.7		None	32	28	1	.....	.....	65
1916	646	58	8,233	58	13	1	01	7.9	496	47	7,534	20	36	2	37	6.6		49	52	1	.....	.....	79
1917	691	56	8,602	64	11		94	8.0	455	62	8,588	17	40	2	23	5.3		36	85	1	3	.....	82
Wellesley—																							
1917	642	52	7,181	68	9		79	9.0	None		353	33	3,393	28	10	1	05	10.4		2,784	78	3	82	33	96	99
Williamsburg—																							
1915	403	72	.....	44	.....	.....	.....	None	139	26	.....	9	.....	.....	.....		None	.....		1	.....	.....	54
1916	568	66	7,392	41	14	1	11	7.7	224	29	3,934	9	36	2	08	5.7		285	73	1	.....	.....	51
1917	551	07	7,003	42	16	1	09	7.9	280	09	3,347	10	30	2	33	8.4		256	38	1	9	28	48	53

*Included in Domestic Light.

STATEMENT "E"

Street Light Installation in Hydro Municipalities, December 31st, 1917, showing Cost per Year, Cost per Lamp, and Cost per Capita.

Municipality	Population	Number of Lamps	Size and Style of Lamps		Cost per Lamp	Total Cost	Cost per Capita
					$ c.	$ c.	$ c.
Toronto	463,705	4	50-watt	m	6 00	365,794 63	79
		6	60 "	m	4 80		
		41,588	100 "	m	8 00 to 10 20		
		91	150 "	m	12 00		
		8	200 "	m	18 00 & 18 40		
		148	250 "	m	20 00 & 23 00		
		33	500 "	m	45 00		
		3	1,000 "	m	90 00		
		452	5 lt. Stds.	m	47 50		
Hamilton	100,461	401	500-Watt	m	40 00	80,855 11	80
		285	250 "	m	12 00		
		516	200 "	m	12 00		
		7,306	100 "	m	7 20		
		10	150 "	m	special		
		6	60 "	m			
		22	40 "	m			
Ottawa	100,163	† 59	arcs	s	45 00	59,928 97	60
		684	400-watt	s	45 00		
		92	250 "	s	35 00		
		454	75 "	s	10 00		
		2,870	100 "	m	60c. per ft.		
		335	100 "	m	6 00		
London	58,055	2,540	75 "	s	10 00	32,057 31	55
		194	200 "	s	Special		
		22	300 "	s			
		18	400 "	s			
		104	500 "	m			
		28	100 "	m			
Brantford	25,420	147	mag. arcs	s	40 00	27,272 40	1 08
		2,867	100-watt	m	7 50		
		10	150 "	m	9 00		
Windsor	24,162	287	500 "	s	50 00	38,025 51	*
		1,976	75 "	s	12 00		
		21	250 "	s	24 00		
Peterboro'	20,426	121	arcs	s	50 00	13,994 22	69
		102	magnetites	s	50 50		
		355	60-watt	s	9 00		
Kitchener	19,266	9	500 "	m	33 00	16,155 08	84
		4	400 "	m	17 35		
		1,587	100 "	s	9 00		
		35	100 "	s	9 90		
St. Catharines	17,880	2,106	100 "	m	7 50	15,318 53	86
St. Thomas	17,174	113	500 "	s	37 50	14,633 50	86
		20	arcs	s	55 00		
		989	75 "	s	9 50		
Stratford	17,081	11	500 "	s	50 00	16,114 98	94
		172	500 "	s	45 00		
		5	500 "	s	40 00		
		758	75 "	s	10 00		
Guelph	16,735	2	1,000 watt	m		9,767 93	60
		91	200 "	m			
		988	100 "	m			
		8	50 "	m			
Port Arthur	14,307	1,675	100 "	m	7 49	15,614 02	1 09
		15	100 "	m	5 62		
		724	60 "	m	4 78		

* Does not include fixed charges on proportion of ornamental system financed with local improvement debentures.

† Replaced by ornamental lamps but still charged as City's share of ornamental lighting

STATEMENT "E"—Continued

Street Light Installation in Hydro Municipalities, December 31st, 1917, showing Cost per Year, Cost per Lamp, and Cost per Capita.

Municipality	Population	Number of Lamps	Size and Style of Lamps	Cost per Lamp	Total Cost	Cost per Capita
				$ c.	$ c.	$ c.
Chatham	12,863	69	500-watt s	38 00	13,258 04	1 03
		83	400 " s	30 00		
		656	100 " s	12 00		
		31	100 " s	10 00		
Owen Sound	11,910	53	250-watt s	50 00	7,000 00	59
		399	75 " s	11 00		
Galt	11,852	78	500-watt m	.....	13,915 32	1 18
		116	300 " m			
		191	100 " m			
		22	4 lt. Stds. m			
		882	75-watt s			
Sarnia	11,676	661	100 " s	15 00	13,026 05	1 11
		78	750 " s	50 00		
Niagara Falls	11,147	101	650 " s	45 00	12,148 21	1 09
		18	arcs s	45 00		
		623	100 " s	11 00		
		16	100 " s	12 00		
Woodstock	10,084	50	250 " s	24 00	7,297 50	72
		407	100 " s	9 00		
		83	100 " m	9 00		
		172	60 " m	9 00		
Brockville	9,428	52	5 lt. Stds. m	45 00	9,543 89	1 01
		36	3 lt. Stds. m	40 00		
		398	100-watt m	13 12		
Welland	7,243	102	250-watt m	18 00	5,183 75	72
		357	100 " m	9 00		
		* 16	100 " m	11 00		
Barrie	6,453	436	100 " s	10 00	4,564 17	71
Collingwood	6,361	394	75 " s	10 00	3,940 00	62
Midland	6,258	16	750 " s	40 00	3,451 67	55
		284	100 " s	10 00		
Ingersoll	5,176	26	500 " s	35 00	4,036 72	78
		220	85 " s	11 50		
		67	70 " s	11 00		
Walkerville	5,096	698	60 " m	5 60	5,255 29	**
		†104	100 " m	12 00		
		‡ 20	60 " m	12 00		
Waterloo	4,956	44	5 lt. Stds. m	40 00	5,819 19	1 17
		8	3 " m	25 00		
		14	150-watt m	10 50		
		38	100 " m	8 75		
		388	75 " s	8 75		
Goderich	4,655	16	3 lt. Stds. m	50 00	5,129 84	1 10
		8	1 " m	35 00		
		8	1 " m	25 00		
		275	60-watt s	14 00		
Dundas	4,652	3	40 " m	3 60	3,547 73	**
		6	60 " m	9 50		
		287	100 " m	9 00		
		14	100 " m	8 50		
		1	100 " m	9 50		
		1	100 " m	10 00		
		§ 30	100 " m	14 00		
		§§ 24	100 " m	12 00		
		§§§ 5	100 " m	12 00		

* Pt. Robinson. † Ford City. ‡ Tecumseh. § West Hamilton. §§ Ancaster. §§§ Greensville.
** Rural Revenue included distorts results.

STATEMENT "E"—Continued

Street Light Installation in Hydro Municipalities, December 31st, 1917, showing Cost per Year, Cost per Lamp, and Cost per Capita.

Municipality	Population	Number of Lamps	Size and Style of Lamps	Cost per Lamp	Total Cost	Cost per Capita
				$ c.	$ c.	$ c.
Preston	4,643	47	60-watt s	11 00	3,116 66	67
		223	100 " s	12 00		
Paris	4,370	375	75 " s	11 00	4,576 00	1 05
		40	75 " s	11 00		
Wallaceburg	4,107	28	400-watt s	30 00	3,121 60	76
		170	75 " s	13 50		
Simcoe	4,061	27	400 " s	38 00	4,068 00	1 00
		230	100 " s	14 00		
Brampton	4,041	571	100 " m		4,296 25	1 06
St. Mary's	3,958	45	150 " s	25 00	5,400 00	1 37
		205	75 " s	13 00		
Penetang	3,928	173	75 " s	12 00	2,159 00	55
Petrolia	3,891	24	600 watt s	55 00	3,436 04	88
		136	100 " s	15 50		
Tillsonburg	3,084	240	75 " s	11 00	2,608 80	85
Strathroy	2,998	32	175 " s	23 00	4,698 12	1 56
		283	75 " s	14 00		
Hespeler	2,740	18	200 " s	18 00	1,990 16	73
		129	100 " s	13 00		
Prescott	2,740	353	100 " m		2,500 00	92
Orangeville	2,493	55	150 " s	15 00	1,648 95	67
		87	100 " s	12 00		
Listowel	2,326	26	350 " m	30 00	3,018 80	1 29
		222	60 " m	12 50		
Huntsville	2,395	28	400 " s	30 00	1,860 00	78
		40	150 " s	14 00		
		30	100 " s	11 00		
		12	60 " s	11 00		
Ridgetown	2,326	17	200 " s	37 00	2,969 02	1 28
		130	100 " s	18 00		
Elmira	2,270	154	100 " m	12 00	1,848 00	82
Clinton	2,177	4	100 " m	12 50	1,661 44	77
		128	75 " s	12 50		
		211	75 " s	12 00		
Weston	2,156	8	5 lt. Stds. m	40 00	3,498 00	1 23
		26	York Tp. s	16 00		
		26	Etobicoke Tp. s	15 00		
Milton	2,072	183	100-watt m	11 00	2,040 77	1 00
Mimico	1,976	157	100 " m	11 00	2,291 12	1 16
		61	100 " m	16 00		
Chesley	1,975	97	100 " s	13 00	1,285 06	65
Seaforth	1,964	10	80 " s	13 00	1,869 96	95
		70	80 " s	12 00		
		60	100 " s	15 00		
Mount Forest	1,941	171	100 " s	12 00	1,710 00	88
Georgetown	1,905	160	100 " m	11 00	1,751 98	92
		12	Glenwilliam m	12 00		
Palmerston	1,843	106	100-watt s	15 00	1,582 50	86
Fergus	1,776	130	100 " m	12 50	1,583 34	89
Tilbury	1,740	61	100 " m	15 00	915 00	53

STATEMENT "E"—Continued

Street Light Installation in Hydro Municipalities, December 31st, 1917, showing Cost per Year, Cost per Lamp, and Cost per Capita.

Municipality	Population	Number of Lamps	Size and Style of Lamps	Cost per Lamp	Total Cost	Cost per Capita
				$ c.	$ c.	$ c.
Acton	1,735	72 62	75-watt s 100 " m	12 50 12 50	1,300 34	75
Gravenhurst	1,702	123 15	75 " s dock lights	10 00 10 00	1,310 80	77
Mitchell	1,687	156	60-watt s	12 00	2,100 00	1 24
Durham	1,600	90	100 " s	12 00	1,080 00	68
Exeter	1,572	23 150	250 " m 100 " m	27 00 14 00	2,721 00	1 73
New Hamburg	1,543	215	100 " m	8 50	1,827 00	1 18
Dresden	1,521	111	100 " s	15 00	1,651 25	1 09
Forest	1,495	12 33 136	100 " m 100 " m 60 " m	20 00 18 00 13 50	2,670 00	1 80
Victoria Harbor	1,477	60	100 " m	9 00	540 00	.....
Blenheim	1,424	13 133	300 " s 100 " s	36 50 15 50	2,536 00	1 78
Harriston	1,404	61	75 " s	16 50	1,006 50	71
Pt. Dalhousie	1,318	85	100 " m	10 00	850 00	.....
Watford	1,220	85 3	100 " m 60 " m	18 50 13 50	453 00	.....
Caledonia	1,217	69	100 " m	12 00	760 00	.....
Norwich	1,189	15 45 53	400 " m 100 " m 60 " m	42 00 10 50 9 00	1,183 56	.....
New Toronto	1,186	66 6	100-watt m 100 " m	12 00 15 00	862 00	73
Waterford	1,133	98	100 " m	14 00	1,355 70	1 19
Arthur	1,003	68	100 " m	14 00	854 22	85
Shelburne	1,115	91	100 " s	12 00	1,059 00	95
Elora	1,115	80	100 " m	12 50	1,000 00	90
Hagersville	1,105	100	100 " m	12 00	1,200 00	1 09
Winchester	1,065	115	100 " m	13 00	1,500 00	1 41
Pt. Credit	1,046	98	100 " m	11 00	1,075 00	1 03
Beaverton	1,015	73	100 " m	12 00	931 68	91
Tavistock	1,000	79	100 " m	20 00	1,711 71	*
Markdale	989	65	100 " s	10 50	684 21	69
Stayner	972	51 15	60 " s 100 " s	9 00 12 00	685 50	86
Cannington	903	69	100 " m	12 00	866 09	96

* Thirteen months' operation.

STATEMENT "E"—Continued

Street Light Installation in Hydro Municipalities, December 31st, 1917, showing Cost per Year, Cost per Lamp, and Cost per Capita.

Municipality	Population	Number of Lamps	Size and Style of Lamps	Cost per Lamp	Total Cost	Cost per Capita
				$ c.	$ c.	$ c.
Milverton	893	88	100-watt m	12 50	1,100 00	1 23
Dutton	870	95	100 " m	15 50	1,439 20	1 64
Port Stanley	849	111	100 " m	13 00	1,608 25	‖
		36	100 " m	6 50		
Chesterville	854	62	100 " m	13 00	806 00	94
Ayr	800	78	100 " m	14 00	1,092 00	1 36
Waterdown	785	59	100 " m	10 00	590 00	75
Thamesville	769	70	100 " m	15 00	1,050 00	1 36
Hensall	749	61	100 " m	15 00	838 75	*
Bolton	727	60	100 " m	14 00	855 00	1 18
West Lorne	724	85	100 " m	16 50	1,286 63	*
Dundalk	721	62	100 " m	12 00	744 00	1 03
Bothwell	703	74	100 " m	15 50	1,146 96	1 63
Lucan	662	66	100 " m	15 00	978 75	1 48
Rodney	655	74	100 " m	16 50	1,058 53	*
Woodbridge	639	74	100 " m	13 00	972 00	1 52
Grand Valley	644	51	100 " m	14 00	710 00	1 10
Ailsa Craig	586	52	100 " m	15 50	790 50	1 35
Creemore	585	55	100 " m	16 00	880 08	1 50
Coldwater	579	44	100 " m	12 00	528 00	91
Wyoming	544	48	100 " m	16 00	768 00	1 41
Embro	483	49	100 " m	14 00	690 32	1 43
Flesherton	428	44	150 " m	11 50	504 00	1 18
Woodville	388	33	100 " m	13 00	427 80	1 10
Chatsworth	374	26	100 " m	12 00	325 00	87
Baden	.....	58	100 " m	11 00	593 00	**
Brechin	.....	9	100 " m	13 00	117 00	**
Beachville	.....	42	100 " m	12 00	504 00	**
Burford	.....	44	100 " m	13 00	572 00	**
Burgessville	.....	16	100 " m	19 00	335 48	**

‖ On account of large summer popuation figures are not representative.
* Does not include a a full year.
** Population not recorded in Government statistics hence no figures were used.

STATEMENT "E"—Concluded

Street Light Installation in Hydro Municipalities, December 31st, 1917, showing Cost per Year, Cost per Lamp, and Cost per Capita.

Municipality	Population	Number of Lamps	Size and Style of Lamps	Cost per Lamp	Total Cost	Cost per Capita
				$ c.	$ c.	$ c.
Comber		47	100-watt m	16 50	775 50	**
Drumbo		30	100 " m	14 00	420 00	**
Delaware		21	100 " m	14 00	241 50	**
Dorchester		27	100 " m	14 00	378 00	**
Dublin		35	100 " m	16 00	§ 83 33	**
Elmvale		52	100 " m	12 00	624 00	**
Granton		32	100 " m	15 00	480 00	**
Holstein		12	150 " m	15 50	186 00	**
Highgate		43	100 " m	16 50	709 50	**
Lambeth		30	100 " m	14 00	420 00	**
Lynden		35	100 " m	12 00	360 00	**
Mount Brydges		38	100 " m	14 00	532 00	**
Otterville		20	100 " m	17 00	340 00	**
Plattsville		31	100 " m	17 00	527 00	**
Princeton		20	100 " m	17 00	340 00	**
Port McNicoll		28	100 " m	12 00	336 00	**
Rockwood		43 5	100 " m 60 "	12 00	528 00	**
Stamford Twp.					936 00	**
Sunderland		21	100 " m	13 00	272 16	**
Springfield		40	100 " m	20 00	325 01	**
St. George		33	100 " m	15 00	495 00	**
St. Jacob's		40	100 " m	15 00	§§ 150 00	**
Thorndale		21	100 " m	14 00	294 00	**
Thamesford		34	100 " m	14 00	476 00	**
Williamsburg		17	100 " m	12 25	208 00	**
Waubaushene		30	100 " m	12 00	360 00	**
Wellesley		50	100 " m	15 00	§§§ 828 12	**

** Population not recorded in Government statistics, hence no figures were used.
§ Two months' service.
§§ Three months' service.
§§§ Thirteen months' service.

STATEMENT "F"

Cost of Power to Municipalities and Power Rates to Consumers

Municipality	Note	Cost of Power to Municipality per H.P. per Year							Power Rates to Consumers									
									1917					Suggested, 1918				
		1912	1913	1914	1915	1916	1917	1918	Service Charge per H.P. per Month	1st 50 Hr. per Month per Kw-hr.	2nd 50 Hr. per Month per Kw-hr.	All Additional per Kw-hr.	Prompt Payment Discount	Service Charge per H.P. per Month	1st 50 Hr. per Month per Kw-hr.	2nd 50 Hr. per Month per Kw-hr.	All Additional per Kw-hr.	Prompt Payment Discount
		$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	c.	c.	c.	%	$ c.	c.	c.	c.	%
Acton	D	.....	36 00	36 00	36 00	36 00	36 00	36 00	1 00	3.6	2.4	0.15	10	1 00	3.6	2.4	0.15	10
Ailsa Craig	D	.....	.....	.....	.....	49 67	49 67	49 67	1 00	6.1	4.1	0.15	10	1 00	6.1	4.1	0.15	10
Ancaster	.....	Served by Dundas							1 00	3	2	0.15	10	1 00	3	2	0.15	10
Arthur	D	.....	.....	.....	.....	.....	45 00	45 00	1 00	5.4	3.6	0.15	10	1 00	5.4	3.6	0.15	10
Ayr	D	.....	.....	.....	37 40	37 40	37 40	37 40	1 00	4.5	3	0.15	10	1 00	4.5	3	0.15	10
Baden	D	36 95	37 00	32 00	32 00	32 00	32 00	32 00	1 00	3.2	2.1	0.15	10	1 00	3.2	2.1	0.15	10
Barrie	D	.....	33 70	33 70	33 70	33 70	31 00	31 00	1 00	3.6	2.4	0.15	10	1 00	3.6	2.4	0.15	10
Beachville	D	33 89	31 00	31 00	31 00	31 00	28 00	28 00	1 00	2.3	1.6	0.15	10	1 00	2.3	1.6	0.15	10
Beaverton	D	.....	.....	.....	66 17	59 00	41 21	41 21	1 00	3.6	2.4	0.3	10	1 00	3.6	2.4	0.3	10
Blenheim	D	.....	.....	.....	.....	43 70	43 70	43 70	1 00	4.2	2.8	0.15	10	1 00	4.2	2.8	0.15	10
Bolton	D	.....	.....	.....	43 00	43 00	43 00	43 00	1 00	4.5	3	0.15	10	1 00	4.5	3.0	0.15	10
Bothwell	D	.....	.....	.....	.....	59 26	59 26	59 26	1 00	5.6	3.8	0.15	10	1 00	5.6	3.8	0.15	10
Brampton	B	29 00	25 00	25 00	25 00	24 00	22 00	22 00	1 00	2.33	1.56	0.167	10&10	1 00	2.33	1.56	0.167	10&10
Brantford	A	.....	.....	19 50	19 50	19 00	19 00	19 00	1 00	1.67	1.11	0.133	10&10	1 00	1.67	1.11	0.133	10&10
Brechin	D	.....	.....	.....	56 79	67 00	50 00	50 00	1 00	4.5	3	0.3	10	1 00	4.5	3	0.3	10
Bridgeport, ext.	.....	Served by Kitchener							1 00	2.8	1.8	0.15	10	1 00	2.8	1.8	0.15	10
Bullock's Corners and Greensville, ext.	.....	Served by Dundas							1 00	2.8	1.8	0.15	10	1 00	2.8	1.8	0.15	10
Burford	D	.....	.....	.....	37 50	37 50	37 50	27 50	1 00	4.2	2.8	0.15	10	1 00	4.2	2.8	0.15	10
Burgessville	D	.....	.....	.....	.....	.....	48 38	48 38	1 00	4.9	3.3	0.15	10	1 00	4.9	3.3	0.15	10
Caledonia	D	29 10	29 10	24 00	24 00	24 00	24 00	24 00	1 00	2.2	1.5	0.15	10	1 00	2.2	1.5	0.15	10
Cannington	D	.....	.....	.....	65 77	63 00	45 79	45 79	1 00	3.6	2.4	0.3	10	1 00	3.6	2.4	0.3	10
Chatham	A	.....	.....	.....	30 78	30 78	30 78	30 78	1 00	3.2	2.1	0.15	10	1 00	3.2	2.1	0.15	10
Chatsworth	D	.....	.....	.....	.....	30 18	30 18	30 18	1 00	3.5	2.3	0.15	10	1 00	3.5	2.3	0.15	10
Chesley	D	.....	.....	.....	.....	40 00	40 00	40 00	1 00	4.2	2.8	0.15	10	1 00	4.2	2.8	0.15	10
Chesterville	D	.....	.....	36 12	43 29	46 00	46 00	46 00	1 00	4.2	2.8	0.3	10	1 00	4.2	2.8	0.3	10

Clinton	A	.....	.....	39 00	39 00	42 00	42 00	42 00	1 00	4.7	3.1	0.15	10	1 00	4.7	3.1	0.15	10
Coldwater	D	.....	28 00	28 00	28 00	28 00	28 00	28 00	1 00	3.2	2.1	0.15	10	1 00	3.2	2.1	0.15	10
Collingwood	D	.....	33 79	33 79	33 79	33 97	30 00	30 00	1 00	2	1.5	0.15	10	1 00	2	1.5	0.15	10
Comber	D	.....	.....	.....	.....	56 22	56 22	56 22	1 00	6.8	4.5	0.15	10	1 00	6.8	4.5	0.15	10
Creemore	D	.....	.....	54 13	54 13	54 13	54 13	54 13	1 00	6.4	4.3	0.15	10	1 00	6.4	4.3	0 15	10
Delaware	D	.....	.....	.....	46 56	46 56	46 56	46 56	1 00	5.4	3.6	0.15	10	1 00	5.4	3.6	0.15	10
Dorchester	D	.....	.....	.....	45 00	45 00	45 00	45 00	1 00	5.2	3.5	0.15	10	1 00	5.2	3.5	0.15	10
Dresden	D	.....	.....	.....	43 00	43 00	43 00	43 00	1 00	3.6	2.4	0.15	10	1 00	4.7	3.1	0.15	10
Drumbo	D	.....	.....	.....	40 73	40 73	40 73	40 73	1 00	4.7	3.1	0.15	10	1 00	4.7	3.1	0.15	10
Dublin	D	.....	.....	.....	.....	.....	47 91	47 91	1 00	5.4	3.6	0.15	10	1 00	5.4	3.6	0.15	10
Dundalk	D	.....	.....	.....	.....	27 30	27 30	27 30	1 00	2.9	1.9	0.15	10	1 00	2.9	1.9	0.15	10
Dundas	B	17 00	16 00	15 00	15 00	14 00	14 00	14 00	1 00	1.67	1.11	0.133	10&10	1 00	1.67	1.11	0.133	10&10
Durham	D	.....	.....	.....	.....	33 97	33 97	33 97	1 00	3.8	2.5	0.15	10	1 00	3.8	2.5	0.15	10
Dutton	D	.....	.....	.....	43 53	43 53	43 53	43 53	1 00	4.2	2.8	0.15	10	1 00	4.1	2.7	0.15	10
Elmira	D	.....	38 00	38 00	38 00	38 00	38 00	38 00	1 00	3.9	2.6	0.15	10	1 00	3.9	2.6	0.15	10
Elmvale	D	.....	31 00	31 00	31 00	31 00	31 00	31 00	1 00	3.6	2.4	0.15	10	1 00	3.6	2.4	0.15	10
Elora	D	.....	.....	33 97	33 97	33 97	33 97	33 97	1 00	3.5	2.3	0.15	10	1 00	3.5	2.3	0.15	10
Embro	D	.....	.....	.....	39 85	45 00	45 00	45 00	1 00	4.9	3.3	0.15	10	1 00	4.9	3.3	0.15	10
Etobicoke Township	D	.....	.....	.....	.....	.....	27 00	27 00	1 00	3.2	2.1	0.15	10	1 00	3.2	2.1	0.15	10
Exeter	D	.....	.....	.....	.....	41 66	41 66	41 66	1 00	4.2	2.8	0.15	10	1 00	4.2	2.8	0.15	10
Fergus	D	.....	.....	33 97	33 97	33 97	33 97	33 97	1 00	3.5	2.3	0.15	10	1 00	3.5	2.3	0.15	10
Flesherton	D	.....	.....	.....	.....	25 96	25 96	25 96	1 00	2.6	1.8	0.15	10	1 00	2.6	1.8	0.15	10
Ford City	.....	Served by Walkerville							1 00	3.6	2.4	0.15	10	1 00	3.6	2.4	0.15	10
Forest	D	.....	.....	.....	.....	.....	63 27	63 27	1 00	7.4	4.9	0.15	10	1 00	7.4	4.9	0.15	10
Galt	C	25 00	22 00	21 50	21 50	21 00	20 00	20 00	1 00	2.2	1.467	0.18	25&10	1 00	2.2	1.467	0.18	25&10
Georgetown	D	.....	36 00	36 00	36 00	36 00	36 00	36 00	1 00	3.2	2.1	0.15	10	1 00	3.2	2.1	0.15	10
Glen Williams, ext	.....	Served by Georgetown							1 00	3.6	2.4	0.15	10	1 00	3.6	2.4	0.15	10
Goderich	A	.....	.....	37 00	37 00	43 00	43 00	43 00	1 00	4.7	3.1	0.15	10	1 00	4.7	3.1	0.15	10
Grand Valley	D	.....	.....	.....	.....	.....	45 00	45 00	1 00	5.4	3.6	0.15	10	1 00	5.4	3.6	0.15	10
Granton	D	.....	.....	.....	.....	48 61	48 61	48 61	1 00	5.6	3.8	0.15	10	1 00	5.6	3.8	0.15	10
Guelph	B	25 00	22 00	21 00	21 00	20 00	20 00	20 00	1 00	1.867	1.267	0.16	25&10	1 00	1.867	1.267	0.16	25&10
Hagersville	D	.....	33 21	33 21	33 21	33 21	33 21	33 21	1 00	3.5	2.3	0.15	10	1 00	3.5	2.3	0.15	10
Hamilton	B	17 00	16 00	15 00	15 00	14 00	14 00	14 00	1 00	1.43	1.	0.143	30&10	1 00	1.43	1.	0.143	30&10
Harriston	D	.....	.....	.....	.....	46 62	46 62	46 62	1 00	4.8	3.2	0.15	10	1 00	4.8	3.2	0.15	10
Hensall	D	.....	.....	.....	.....	.....	47 76	47 67	1 00	5.6	3.8	0.15	10	1 00	5.6	3.8	0.15	10
Hespeler	C	26 00	23 00	23 00	23 00	22 50	21 00	21 00	1 00	2.5	1.7	0.15	10	1 00	2.5	1.7	0.15	10
Highgate	D	.....	.....	.....	.....	.....	51 82	51 82	1 00	6	4	0.15	10	1 00	6	4	0.15	10
Holstein	D	.....	.....	.....	.....	43 50	43 50	43 50	1 00	5.2	3.5	0.4	10	1 00	5.2	3.5	0.15	10
Huntsville	D	.....	.....	.....	.....	.....	22 51	22 51	1 00	2	1.4	0.15	10	1 00	2	1.4	0.15	10
Ingersoll	B	28 00	25 50	25 50	25 50	25 00	23 00	23 00	1 00	2.1	1.4	0.15	10	1 00	2.1	1.4	0.15	10

STATEMENT "F"—Continued

Cost of Power to Municipalities and Power Rates to Consumers

Municipality	Note	Cost of Power to Municipality per H.P. per Year							Power Rates to Consumers									
									1917					Suggested, 1918				
		1912	1913	1914	1915	1916	1917	1918	Service Charge per H.P. per Month	1st 50 Hr. per Month per Kw-hr.	2nd 50 Hr. per Month per Kw-hr.	All Additional per Kw-hr.	Prompt Payment Discount	Service Charge per H.P. per Month	1st 50 Hr. per Month per Kw-hr.	2nd 50 Hr. per Month per Kw-hr.	All Additional per Kw-hr.	Prompt Payment Discount
		$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	c.	c.	c.	%	$ c.	c.	c.	c.	%
Kitchener	B	25 00	22 50	21 50	21 50	21 00	20 00	20 00	1 00	1.83	1.233	0.156	10&10	1 00	1.83	1.233	0.156	10&10
Lambeth	D	.....	.....	.....	46 56	46 56	46 56	46 56	1 00	5.4	3.6	0.15	10	1 00	5.4	3.6	0.15	10
Listowel	D	.....	.....	.....	.....	37 41	37 41	37 41	1 00	3.9	2.6	0.15	10	1 00	3.9	2.6	0.15	10
London	B	28 00	24 00	23 00	23 00	22 00	21 00	21 00	1 00	1.67	1.11	0.133	10&10	1 00	1.67	1.11	0.133	10&10
Lucan	D	.....	.....	.....	47 74	47 74	47 74	47 74	1 00	5.4	3.6	0.15	10	1 00	5.4	3.6	0.15	10
Lynden	D	.....	.....	.....	33 00	33 00	33 00	33 00	1 00	3.6	2.4	0.15	10	1 00	3.6	2.4	0.15	10
Markdale	D	.....	.....	.....	.....	23 24	23 24	23 24	1 00	2.5	1.7	0.15	10	1 00	2.5	1.7	0.15	10
Midland	D	21 00	20 30	19 45	19 37	19 27	19 00	19 00	1 00	1.467	1	0.133	25&10	1 00	1.467	1.	0.133	25&10
Milton	B	.....	28 00	28 00	28 00	28 00	28 00	28 00	1 00	2.5	1.7	0.15	10	1 00	2.5	1.7	0.15	10
Milverton	D	.....	.....	.....	.....	35 63	35 63	35 63	1 00	3.9	2.6	0.15	10	1 00	3.9	2.6	0.15	10
Mimico	D	30 74	30 00	28 00	28 00	28 00	27 00	27 00	1 00	2.8	1.8	0.15	10	1 00	2.8	1.8	0.15	10
Mitchell	A	38 00	37 00	37 00	37 00	37 00	36 00	36 00	1 00	3.9	2.6	0.15	10	1 00	3.9	2.6	0.15	10
Mount Brydges	D	.....	.....	.....	46 56	46 56	46 56	46 56	1 00	5.4	3.6	0.15	10	1 00	5.4	3.6	0.15	10
Mount Forest	D	.....	.....	.....	.....	34 51	34 51	34 51	1 00	3.8	2.5	0.15	10	1 00	3.8	2.5	0.15	10
New Hamburg	D	32 00	32 00	32 00	32 00	32 00	32 00	32 00	1 00	3.2	2.1	0.15	10	1 00	3.2	2.1	0.15	10
New Toronto	D	.....	.....	28 00	28 00	28 00	27 00	27 00	1 00	2.33	1.56	0.167	10&10	1 00	2.33	1.56	0.167	10&10
Niagara Falls	B&D	.....	.....	.....	.....	11 50	11 50	11 50	1 00	2.2	1.5	0.18	50&10	1 00	2.2	1.5	0.18	50&10
Norwich	D	30 00	32 00	32 00	32 00	38 00	38 00	38 00	1 00	3	2	0.15	10	1 00	3	2	0.15	10
Orangeville	D	.....	.....	.....	.....	35 00	35 00	35 00	1 00	3.6	2.4	0.15	10	1 00	3.6	2.4	0.15	10
Ottawa	A	15 00	15 00	15 00	14 00	14 00	14 00	14 00	1 00	1.8	1.2	0.15	15&10	1 00	1.8	1.2	0.15	15&10
Otterville	D	.....	.....	.....	.....	45 00	45 00	45 00	1 00	4.9	3.3	0.15	10	1 00	4.9	3.3	0.15	10
Owen Sound	D	.....	.....	.....	.....	31 00	31 00	31 00	1 00	3.5	2.3	0.15	10	1 00	3.5	2.3	0.15	10&10
Palmerston	D	.....	.....	.....	.....	40 82	40 82	40 82	1 00	4.7	3.1	0.15	10	1 00	4.7	3.1	0.15	10
Paris	A	.....	.....	21 00	21 00	21 00	21 00	21 00	1 00	2	1.4	0.15	10	1 00	2.	1.4	0.15	10
Penetang	D	28 80	26 50	26 50	26 50	26 50	22 00	22 00	1 00	1.67	1.11	0.133	10&10	1 00	1.67	1.11	0.133	10&10

Peterboro	C & D	.....	.....	18 00	18 00	17 70	17 70	17 70	1 00	1.3	0.8	0.1	10 &10	1 00	1.3	0.8	0.1	10& 10
Petersburg	.....	Served by Baden							1 00	5.1	3.4	0.15	10	1 00	5.1	3.4	0.15	10
Petrolia	D	.....	.....	.....	.....	36 26	36 26	36 26	1 00	3.6	2.4	0.15	10	1 00	3.6	2.4	0.15	10
Plattsville	D	.....	.....	.....	49 27	49 27	49 27	49 27	1 00	5.4	3.6	0.15	10	1 00	5.4	3.6	0.15	10
Port Arthur	A	20 30	19 50	22 25	22 71	20 75	20 75	19 75	1 00	2	1.3	0.15	10	1 00	1.75	1	0.1	10
Port Credit	D	36 79	31 00	28 00	28 00	27 00	27 00	27 00	1 00	2.8	1.8	0.15	10	1 00	2.8	1.8	0.15	10
Port Dalhousie	D	.....	22 30	21 42	22 49	24 31	25 81	*	1 00	2.3	1.5	0.15	10 &10	1 00	2.3	1.5	0.15	10& 10
Port McNicoll	D	.....	.....	.....	35 00	35 00	25 00	25 00	1 00	3.6	2.4	0.15	10	1 00	3.6	2.4	0.15	10
Port Robinson, ext	.....	Served by Welland							1 00	1.8	1.2	0.15	10	1 00	1.8	1.2	0.15	10
Port Stanley	D	59 75	55 50	43 85	50 90	49 53	46 78	*	1 00	5	3	0.15	10	1 00	5	3	0.15	10
Prescott	D	.....	.....	39 59	28 67	25 00	25 00	25 00	1 00	2.8	1.8	0.2	10	1 00	2.8	1.8	0.2	10
Preston	C	25 00	21 50	21 00	21 00	20 00	19 00	19 00	1 00	1.67	1.11	0.133	10& 10	1 00	1.67	1.11	0.133	10& 10
Princeton	D	.....	.....	.....	65 95	65 95	65 95	65 95	1 00	7.8	5.2	0.15	10	1 00	7.8	5.2	0.15	10
Ridgetown	D	.....	.....	.....	.....	47 17	47 17	47 17	1 00	4.8	3.2	0.15	10	1 00	4.8	3.2	0.15	10
Rockwood	D	.....	38 00	38 00	38 00	38 00	38 00	38 00	1 00	3.9	2.6	0.15	10	1 00	3.9	2.6	0.15	10
Rodney	D	.....	.....	.....	.....	.....	63 00	63 00	1 00	7.8	5.2	0.15	10	1 00	7.8	5.2	0.15	10
Sandwich	.....	Served by Windsor							1 00	3.6	2.4	0.15	10	1 00	3.6	2.4	0.15	10
Sarnia	A	.....	.....	.....	.....	38 00	38 00	38 00	1 00	3.6	2.4	0.15	10	1 00	3.6	2.4	0.15	10
Scarlett Road, ext	.....	Served by Weston							1 00	3.3	2.2	0.3	10	1 00	3.3	2.2	0.3	10
Seaforth	A	41 00	40 00	40 00	40 00	40 00	38 00	38 00	1 00	4.2	2.8	0.15	10	1 00	4.2	2.8	0.15	10
Sebringville, ext	.....	Served by Stratford							1 00	4.5	3	0.15	10	1 00	4.5	3	0.15	10
Shelburne	D	.....	.....	.....	.....	30 00	30 00	30 00	1 00	3	2	0.15	10	1 00	3	2	0.15	10
Simcoe	A	.....	.....	.....	35 00	35 00	35 00	35 00	1 00	3.6	2.4	0.15	10	1 00	3.6	2.4	0.15	10
Springfield	D	.....	.....	.....	.....	.....	65 00	65 00	1 00	7.8	5.2	0.15	10	1 00	7.8	5.2	0.15	10
St. Agatha		See Petersburg																
St. Catharines	B	.....	.....	14 00	14 00	14 00	14 00	14 00	1 00	1.6	1.066	0.16	25 &10	1 00	1.6	1.066	0.16	25& 10
St. George	D	.....	.....	.....	38 78	38 78	38 78	38 78	1 00	3.8	2.5	0.15	10	1 00	3.8	2.5	0.15	10
St. Jacob's	D	.....	.....	.....	.....	.....	42 18	42 18	1 00	4,9	3.3	0.15	10	1 00	4.9	3.3	0.15	10
St. Mary's	B	38 00	29 50	29 50	29 50	28 00	28 00	28 00	1 00	3.1	2.1	0.15	10	1 00	3.1	2.1	0.15	10
St. Thomas	B	32 00	29 00	28 00	28 00	27 00	26 00	26 00	1 00	1.67	1.11	0.133	10& 10	1 00	1.67	1.11	0.133	10& 10
Stayner	D	.....	.....	37 82	37 82	37 82	35 00	35 00	1 00	4.2	2.8	0.15	10	1 00	3.5	2.3	0.15	10
Stratford	A	32 00	30 00	30 00	30 00	29 00	27 00	27 00	1 00	2.6	1.8	0.15	10	1 00	2.6	1.8	0.15	10
Strathroy	B	.....	.....	.....	44 07	44 07	44 07	44 01	1 00	3.6	2.4	0.15	10	1 00	3.6	2.4	0.15	10
Sunderland	D	.....	.....	.....	82 68	81 00	50 00	50 00	1 00	4.5	3	0.4	10	1 00	4.5	3	0.4	10
Tavistock	D	.....	.....	.....	.....	.....	78 28	37 01	1 00	7.8	5.2	0.15	10	1 00	3.9	2.6	0.15	10
Thamesford	D	.....	.....	45 00	45 00	45 00	45 00	45 00	1 00	5.2	3.5	0.15	10	1 00	5.2	3.5	0.15	10
Thamesville	D	.....	.....	.....	.....	45 40	45 40	45 40	1 00	4.7	3.1	0.15	10	1 00	4.7	3.1	0.15	10
Thorndale	D	.....	.....	45 00	45 00	45 00	45 00	45 00	1 00	5.2	3.5	0.15	10	1 00	5.2	3.5	0.15	10
Tilbury	D	.....	.....	.....	39 45	39 45	39 45	39 45	1 00	4.3	2.9	0.15	10	1 00	4.3	2.9	0.15	10
Tillsonburg	B	32 00	32 00	32 00	32 00	35 00	35 00	35 00	1 00	3.8	2.5	0.15	10	1 00	3.8	2.5	0.15	10

STATEMENT "F"—Concluded

Cost of Power to Municipalities and Power Rates to Consumers

Municipality	Note	Cost of Power to Municipality per H.P. per Year							Power Rates to Consumers									
									1917					Suggested, 1918				
		1912	1913	1914	1915	1916	1917	1918	Service Charge per H.P. per Month	1st 50 Hr. per Month per Kw-hr.	2nd 50 Hr. per Month per Kw-hr.	All Additional per Kw-hr.	Prompt Payment Discount	Service Charge per H.P. per Month	1st 50 Hr. per Month per Kw-hr.	2nd 50 Hr. per Month per Kw-hr.	All Additional per Kw-hr.	Prompt Payment Discount
		$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	c.	c.	c.	%	$ c.	c.	c.	c.	%
Toronto	B	18 50	15 00	15 00	15 00	14 50	14 50	14 50	$1.25 1st 10 h.p. $1.00 all add'i	1.5	0.15	0.15	20	$1.25 1st 10 h.p. $1.00 all add'i	1.5	0.5	0.15	20
Victoria Harbour	D	.....	.....	.....	35 00	35 00	35 00	35 00	1 00	3.9	2.6	0.15	10	1 00	3.9	2.6	0.15	10
Walkerville	A	.....	.....	38 00	38 00	38 00	38 00	38 00	1 00	3.6	2.4	0.15	10	1 00	3.6	2.4	0.15	10
Wallaceburg	D	.....	.....	.....	38 45	38 45	38 45	38 45	1 00	3.6	2.4	0.15	10	1 00	3.6	2.4	0.15	10
Waterdown	D	37 50	26 00	26 00	26 00	26 00	26 00	26 00	1 00	3.3	2.2	0.15	10	1 00	3.3	2.2	0.15	10
Waterford	D	.....	.....	.....	39 00	39 00	39 00	39 00	1 00	4.5	3	0.15	10	1 00	4.5	3	0.15	10
Waterloo	B	26 00	23 50	22 50	22 50	22 00	21 00	21 00	1 00	2.5	1.7	0.2	25&10	1 00	2.5	1.7	0.2	25&10
Watford	D	.....	.....	.....	.....	.....	59 45	59 45	1 00	7.1	4.7	0.15	10	1 00	7.1	4.7	0.15	10
Waubaushene	D	.....	.....	.....	35 00	35 00	25 00	25 00	1 00	3.6	2.4	0.15	10	1 00	3.6	2.4	0.15	10
Welland	B	.....	14 50	14 00	14 00	14 00	14 00	14 00	1 00	1.73	1.13	0.147	25&10	1 00	1.73	1.13	0.147	25&10
Wellesley	D	.....	.....	.....	.....	.....	39 96	39 96	1 00	3.9	2.6	0.15	10	1 00	3.9	2.6	0.15	10
West Hamilton, ext.	.....	Served by Dundas							1 00	2.8	1.8	0.15	25	1 00	2.8	1.8	0.15	25
West Lorne	D	.....	.....	.....	.....	.....	55 60	55 60	1 00	6.5	4.4	0.15	10	1 00	6.5	4.4	0.15	10
Weston	B	30 00	30 00	30 00	30 00	30 00	30 00	30 00	1 00	2.3	1.6	0.15	10	1 00	2.3	1.6	0.15	10
Williamsburg	D	.....	.....	.....	25 09	30 00	30 00	30 00	1 00	4.2	2.8	0.3	10	1 00	4.2	2.8	0.3	10
Winchester	D	.....	.....	38 28	39 54	43 00	43 00	43 00	1 00	3.1	2	0.25	10	1 00	3.1	2	0.25	10
Windsor	A	.....	.....	38 00	38 00	38 00	38 00	38 00	1 00	3.6	2.4	0.15	10	1 00	3.6	2.4	0.15	10
Woodbridge	D	.....	.....	.....	33 83	33 83	33 83	33 83	1 00	3.6	2.4	0.15	10	1 00	3.6	2.4	0.15	10
Woodstock	B	26 00	23 00	23 00	23 00	23 00	21 00	21 00	1 00	2.133	1.33	0.173	25&10	1 00	2.133	1.33	0.173	25&10
Woodville	D	.....	.....	.....	70 24	70 00	50 00	50 00	1 00	4.5	3	0.4	10	1 00	4.5	3	0.4	10
Wyoming	D	.....	.....	.....	.....	38 34	38 34	28 34	1 00	4.2	2.8	0.15	10	1 00	4.2	2.8	0.15	10

*Rate based on load characteristics and determined at end of year.
Note A—Power delivered at 26,400 or 22,000 volts.
Note B—Power delivered at 13,200 or 12,000 volts.
Note C—Power delivered at 6,600 volts.
Note D—Power delivered at 2,300 or 4,000 volts.

LIGHTING RATES
IN
MUNICIPALITIES

STATEMENT "G"

Lighting Rates in Municipalities

Municipality	1917							Suggested 1918						
	Domestic			Commercial				Domestic			Commercial			
	Per 100 Sq. Ft.	1st 3 Kw-hr. per 100 sq. ft. per Kw-hr.	All Additional per Kw-hr.	1st 30 Hr. per Kw-hr.	Next 70 Hr. per Kw-hr.	All Additional per Kw-hr.	Prompt Payment Discount	Per 100 Sq. Ft.	1st 3 kw-hr. per 100 sq. ft. per Kw-hr.	All Additional per Kw-hr.	1st 30 Hr. per Kw-hr.	Next 70 Hr. per Kw-hr.	All Additional per Kw-hr.	Prompt Payment Discount
	c.	c.	c.	c.	c.	c.	%	c.	c.	c.	c.	c.	c.	%
Acton	3	3.5	1.75	7	3.5	0.7	10	3	3.5	1.75	7	3.5	0.7	10
Ailsa Craig	3	6.5	3.25	13	6.5	1.3	10	3	6.5	3.25	13	6.5	1.3	10
Ancaster	3	5	2.5	10	5	1	10	3	5	2.5	10	5	1	10
Arthur	3	6	3	12	6	1.2	10	3	6	3	12	6	1.2	10
Ayr	3	5	2.5	10	5	1	10	3	5	2.5	10	5	1	10
Baden	3	3.5	1.75	7	3.5	0.7	10	3	3.5	1.75	7	3.5	0.7	10
Barrie	3	3	1.5	6	3	0.6	10	3	3	1.5	6	3	0.6	10
Beachville	3	4	2	8	4	0.8	10	3	4	2	8	4	0.8	10
Beaverton	3	4	2	8	4	0.8	10	3	4	2	8	4	0.8	10
Blenheim	3	5	2.5	10	5	1	10	3	5	2.5	10	5	1	10
Bolton	3	5	2.5	10	5	1	10	3	5	2.5	10	5	1	10
Bothwell	3	7.5	3.75	15	7.5	1.5	10	3	7.5	3.75	15	7.5	1.5	10
Brampton	3	2	1	5	2	0.5	10	3	2	1	5	2	0.5	10
Brantford	3	2	1	4.5	2.25	0.15	10	3	2	1	4.5	2.25	0.15	10
Brechin	3	6	3	12	6	1.2	10	3	6	3	12	6	1.2	10
Bridgeport	Kitchener rate + 10 %							Kitchener rate + 10 %						
Bullock's Corners and Greensville, ext.	3	4	2	8	4	0.8	10	3	4	2	8	4	0.8	10
Burford	3	5	2.5	10	5	1	10	3	5	2.5	10	5	1	10
Burgessville	3	5.5	2.75	11	5.5	1.1	10	3	5.5	2.75	11	5.5	1.1	10
Caledonia	3	3	1.5	6	3	0.6	10	3	3	1.5	6	3	0.6	10
Cannington	3	4	2	8	4	0.8	10	3	4	2	8	4	0.8	10
Chatham	3	3.5	1.75	7	3.5	0.7	10	3	3.5	1.75	7	3.5	0.7	10
Chatsworth	3	4.5	2.25	9	4.5	0.9	10	3	5.5	2.75	11	5.5	1.1	10
Chesley	3	5	2.5	10	5	1	10	3	5	2.5	10	5	1	10
Chesterville	3	5	2.5	10	5	1	10	3	5	2.5	10	5	1	10

Clinton	3	4.5	2.25	9	4.5	0.9	10	3	4.5	2.25	9	4.5	0.9	10
Coldwater	3	4	2	8	4	0.8	10	3	4	2	8	4	0.8	10
Collingwood	3	2.5	1.25	5	2.5	0.5	10	3	2.5	1.25	5	2.5	0.5	10
Comber	3	7	3.5	14	7	1.4	10	3	7	3.5	14	7	1.4	10
Creemore	3	7	3.5	14	7	1.4	10	3	7	3.5	14	7	1.4	10
Delaware	3	6	3	12	6	1.2	10	3	6	3	12	6	1.2	10
Doon and Blair, ext.	3	4	2	8	4	0.8	10	3	4	2	8	4	0.8	10
Dorchester	3	5	2.5	10	5	1	10	3	5	2.5	10	5	1	10
Dresden	3	5	2.5	10	5	1	10	3	5	2.5	10	5	1	10
Drumbo	3	5	2.5	10	5	1	10	3	5	2.5	10	5	1	10
Dublin	3	6	3	12	6	1.2	10	3	6	3	12	6	1.2	10
Dundalk	3	4	2	8	4	0.8	10	3	4	2	8	4	0.8	10
Dundas	3	2	1	5	2	0.15	10	3	2	1	5	2	0.15	10
Durham	3	4.5	2.25	9	4.5	0.9	10	3	4.5	2.25	9	4.5	0.9	10
Dutton	3	5	2.5	10	5	1	10	3	4.5	2.25	9	4.5	0.9	10
Elmira	3	3.5	1.75	7	3.5	0.7	10	3	3.5	1.75	7	3.5	0.7	10
Elmvale	3	4.5	2.25	9	4.5	0.9	10	3	4.5	2.25	9	4.5	0.9	10
Elora	3	3.5	1.75	7	3.5	0.7	10	3	3.5	1.75	7	3.5	0.7	10
Embro	3	5.5	2.75	11	5.5	1.1	10	3	5.5	2.75	11	5.5	1.1	10
Etobicoke Tp.	3	4.5	2.25	9	4.5	0.9	10	3	4.5	2.25	9	4.5	0.9	10
Exeter	3	5.5	2.75	11	5.5	1.1	10	3	5.5	2.75	11	5.5	1.1	10
Fergus	3	3.5	1.75	7	3.5	0.7	10	3	3.5	1.75	7	3.5	0.7	10
Flesherton	3	3.5	1.75	7	3.5	0.7	10	3	3.5	1.75	7	3.5	0.7	10
Ford City	3	4	2	8	4	0.8	10	3	4	2	8	4	0.8	10
Forest	3	7	3.5	14	7	1.4	10	3	7	3.5	14	7	1.4	10
Galt	3	2	1	5	2	0.5	10	3	2	1	5	2	0.5	10
Georgetown	3	3	1.5	6	3	0.6	10	3	3	1.5	6	3	0.6	10
Glen Williams, ext.	3	5	2.5	10	5	1	10	3	5	2.5	10	5	1	10
Goderich	3	4.5	2.25	9	4.5	0.9	10	3	4.5	2.25	9	4.5	0.9	10
Grand Valley	3	6	3	12	6	1.2	10	3	6	3	12	6	1.2	10
Granton	3	6	3	12	6	1.2	10	3	6	3	12	6	1.2	10
Guelph	3	2	1	4	2	0.4	10	3	2	1	4	2	0.4	10
Hagersville	3	3.5	1.75	7	3.5	0.7	10	3	3.5	1.75	7	3.5	0.7	10
Hamilton	3	2	1	3.5	1.2	0.15	10	3	2	1	3.5	1.2	0.12	10
Harriston	3	5.5	2.75	11	5.5	1.1	10	3	5.5	2.75	11	5.5	1.1	10
Hensall	3	6	3	12	6	1.2	10	3	6	3	12	6	1.2	10
Hespeler	3	3.5	1.75	7	3.5	0.7	10	3	3.5	1.75	7	3.5	0.7	10
Highgate	3	6.5	3.25	13	6.5	1.3	10	3	6.5	3.25	13	6.5	1.3	10
Holstein	3	6	3	12	6	1.2	10	3	6	3	12	6	1.2	10
Huntsville	3	5	2.5	7	3.5	0.7	10	3	5	2.5	7	3.5	0.7	10

STATEMENT "G"—Continued

Lighting Rates in Municipalities

Municipality	1917							Suggested, 1918						
	Domestic			Commercial			Prompt Payment Discount	Domestic			Commercial			Prompt Payment Discount
	Per 100 Sq. Ft.	1st 3 kw-hr. per 100 sq. ft. per Kw-hr.	All Additional per Kw-hr.	1st 30 Hr. per Kw-hr.	Next 70 Hr. per Kw-hr.	All Additional per Kw-hr.		Per 100 Sq. Ft.	1st 3 Kw-hr. per 100 sq. ft. per Kw-hr.	All Additional per Kw-hr.	1st 30 Hr. per Kw-hr.	Next 70 hr per Kw-Hr.	All Additional per Kw-hr.	
	c.	c.	c.	c.	c.	c.	%	c.	c.	c.	c.	c.	c.	%
Ingersoll	3	3	1.5	6	3	0.6	10	3	3	1.5	6	3	0.6	10
Kitchener	3	2	1	4	2	0.4	10	3	2	1	4	2	0.4	10
Lambeth	3	6	3	12	6	1.2	10	3	6	3	12	6	1.2	10
Listowel	3	5	2.5	10	5	1	10	3	5	2.5	10	5	1	10
London	3	2	1	4	2	0.4	10	3	2	1	4	2	0.4	10
Lucan	3	6	3	12	6	1.2	10	3	6	3	12	6	1.2	10
Lynden	3	4.5	2.25	9	4.5	0.9	10	3	4.5	2.25	9	4.5	0.9	10
Markdale	3	3.5	1.75	7	3.5	0.7	10	3	3.5	1.75	7	3.5	0.7	10
Midland	3	2.5	1.25	5	2.5	0.5	10	3	2.5	1.25	5	2.5	0.5	10
Milton	3	3.5	1.75	7	3.5	0.7	10	3	3.5	1.75	7	3.5	0.7	10
Milverton	3	5	2.5	10	5	1	10	3	5	2.5	10	5	1	10
Mimico	3	3	1.5	6	3	0.6	10	3	3	1.5	6	3	0.6	10
Mitchell	3	4	2	8	4	0.8	10	3	4	2	8	4	0.8	10
Mount Brydges	3	6	3	12	6	1.2	10	3	6	3	12	6	1.2	10
Mount Forest	3	4.5	2.25	9	4.5	0.9	10	3	4.5	2.25	9	4.5	0.9	10
New Hamburg	3	3	1.5	6	3	0.6	10	3	3	1.5	6	3	0.6	10
New Toronto	3	3	1.5	6	3	0.6	10	3	3	1.5	6	3	0.6	10
Niagara Falls	3	2	1	4	1.5	0.15	10	3	2	1	4	1.5	0.15	10
Norwich	3	3	1.5	6	3	0.6	10	3	3	1.5	6	3	0.6	10
Orangeville	3	4.5	2.25	9	4.5	0.9	10	3	4.5	2.25	9	4.5	0.9	10
Ottawa	3	2.2	1.1	5	2.2	0.5	10	3	2	1	5	2.2	0.5	10
Otterville	3	5.5	2.75	11	5.5	1.1	10	3	5.5	2.75	11	5.5	1.1	10
Owen Sound	3	4.5	2.25	9	4.5	0.9	10	3	4.5	2.25	9	4.5	0.9	20
Palmerston	3	5	2.5	10	5	1	10	3	5	2.5	10	5	1	10
Paris	3	3	1.5	6	3	0.6	10	3	3	1.5	6	3	0.6	10

Penetang	3	3	1.5	6	3	0.6	10	3	3	1.5	6	3	0.6	10
Peterboro'	3	2.5	1.25	5	2.5	0.5	10	3	2.5	1.25	5	2.5	0.5	10
Petersburg, ext	3	6	3	12	6	1.2	10	3	6	3	12	6	1.2	10
Petrolia	3	4.5	2.25	9	4.5	0.9	10	3	4.5	2.25	9	4.5	0.9	10
Plattsville	3	6	3	12	6	1.2	10	3	6	3	12	6	1.2	10
Port Arthur	4	2.5	1.5	6	2.5	2.5	10	3	2	1	5	2	0.5	10
Port Credit	3	3	1.5	6	3	0.6	10	3	3	1.5	6	3	0.6	10
Port Dalhousie	3	4	2	8	4	0.8	10	3	4	2	8	4	0.8	10
Port McNicoll	3	4.5	2.25	9	4.5	0.9	10	3	4.5	2.25	9	4.5	0.9	10
Port Robinson, ext	3	3	1.5	6	3	0.6	10	3	3	1.5	6	3	0.6	10
Port Stanley	3	4	2	8	4	0.8	10	3	4	2	8	4	0.8	10
Prescott	3	4	2	8	4	0.8	10	3	4	2	8	4	0.8	10
Preston	3	2.5	1.25	5	2.5	0.5	10	3	2.5	1.25	5	2.5	0.5	10
Princeton	3	7	3.5	14	7	1.4	10	3	7	3.5	14	7	1.4	10
Ridgetown	3	5.5	2.75	11	5.5	1.1	10	3	5.5	2.75	11	5.5	1.1	10
Rockwood	3	4	2	8	4	0.8	10	3	4	2	8	4	0.8	10
Rodney	3	8	4	16	8	1.6	10	3	8	4	16	8	1.6	10
Sarnia	3	4	2	8	4	0.8	10	3	4	2	8	4	0.8	10
Scarlet Road, ext	4	4	4	8	4	4	10	4	4	4	8	4	4	10
Seaforth	3	4	2	8	4	0.8	10	3	4	2	8	4	0.8	10
Sebringville, ext	3	5	2.5	10	5	1	10	3	5	2.5	10	5	1	10
Shelburne	3	4	2	8	4	0.8	10	3	4	2	8	4	0.8	10
Simcoe	3	4	2	8	4	0.8	10	3	4	2	8	4	0.8	10
Springfield	3	8	4	16	8	1.6	10	3	8	4	16	8	1.6	10
St. Agatha	See Petersburg													
St. Catharines	3	2	1	4	1.5	0.15	10	3	2	1	4	1.5	0.15	10
St. George	3	5	2.5	10	5	1	10	3	5	2.5	10	5	1	10
St. Jacob's	3	5.5	2.75	11	5.5	1.1	10	3	5.5	2.75	11	5.5	1.1	10
St. Mary's	3	3	1.5	6	3	0.6	10	3	3	1.5	6	3	0.6	10
St. Thomas	3	2	1	5	2	0.5	10	3	2	1	4	2	0.4	10
Stayner	3	4.5	2.25	9	4.5	0.9	10	3	4.5	2.25	9	4.5	0.9	10
Stratford	3	2.5	1.25	5	2.5	0.5	10	3	2.5	1.25	5	2.5	0.5	10
Strathroy	3	4	2	8	4	0.8	10	3	4	2	8	4	0.8	10
Sunderland	3	6	3	12	6	1.2	10	3	6	3	12	6	1.2	10
Tavistock	3	8	4	16	8	1.6	10	3	5	2.5	10	5	1	10
Tecumseh, ext	3	5	2.5	10	5	1	10	3	5	2.5	10	5	1	10
Thamesford	3	5	2.5	10	5	1	10	3	5	2.5	10	5	1	10
Thamesville	3	6	3	12	6	1.2	10	3	6	3	12	6	1.2	10
Thorndale	3	5	2.5	10	5	1	10	3	5	2.5	10	5	1	10
Tilbury	3	5	2.5	10	5	1	10	3	5	2.5	10	5	1	10

STATEMENT "G"—Concluded

Lighting Rates in Municipalities

Municipality	1917							Suggested 1918						
	Domestic			Commercial			Prompt Payment Discount	Domestic			Commercial			Prompt Payment Discount
	Per 100 sq. ft.	1st 3 Kw-hr. per 100 sq. ft. per Kw-hr.	All Additional per Kw-hr.	1st 30 Hr. per Kw. hr.	Next 70 Hr. per Kw-hr.	All Additional per Kw-hr.		Per 100 sq. ft.	1st 3 Kw-hr. per 100 sq. ft. per Kw-hr.	All Additional per Kw-hr.	1st 30 Hr. per Kw-hr.	Next 70 Hr. per Kw-hr.	All Additional per Kw-hr.	
	c.	c.	c.	c.	c.	c.	%	c.	c.	c.	c.	c.	c.	%
Tillsonburg	3	3.5	1.75	7	3.5	0.7	10	3	3.5	1.75	7	3.5	0.7	10
Toronto	3	2	1	5	2.5	0.5	10	3	2	1	5	2.5	0.5	10
Victoria Harbour	3	3.5	1.75	7	3.5	0.7	10	3	3.5	1.75	7	3.5	0.7	10
Walkerville	3	4	2	8	4	0.8	10	3	4	2	8	4	0.8	10
Wallaceburg	3	5	2.5	10	5	1	10	3	5	2.5	10	5	1	10
Waterdown	3	4	2	8	4	0.8	10	3	4	2	8	4	0.8	10
Waterford	3	5	2.5	10	5	1	10	3	5	2.5	10	5	1	10
Waterloo	3	2	1	5	2.5	0.5	10	3	2	1	5	2.5	0.5	10
Watford	3	7.5	3.75	15	7.5	1.5	10	3	7.5	3.75	15	7.5	1.5	10
Waubaushene	3	4.5	2.25	9	4.5	0.9	10	3	4.5	2.25	9	4.5	0.9	10
Welland	3	2	1	5	2	0.15	10	3	2	1	5	2	0.15	10
Wellesley	3	5	2.5	10	5	1	10	3	5	2.5	10	5	1	10
West Hamilton, ext.	3	4	2	8	4	0.8	10	3	4	2	8	4	0.8	10
West Lorne	3	7	3.5	14	7	1.4	10	3	7	3.5	14	7	1.14	10
Weston	3	2.5	1.25	5	2.5	0.5	10	3	2.5	1.25	5	2.5	0.5	10
Williamsburg	3	5	2.5	10	5	1	10	3	5	2.5	10	5	1	10
Winchester	3	4	2	8	4	0.8	10	3	4	2	8	4	0.8	10
Windsor Sandwich	3	4	2	8	4	0.8	10	3	4	2	8	4	0.8	10
Woodbridge	3	4	2	8	4	0.8	10	3	4	2	8	4	0.8	10
Woodstock	3	2	1	4	2	0.4	10	3	2	1	4	2	0.4	10
Woodville	3	6	3	12	6	1.2	10	3	6	3	12	6	1.2	10
Wyoming	3	5	2.5	10	5	1	10	3	5	2.5	10	5	1	10

Tenth Annual Report

OF THE

HYDRO-ELECTRIC POWER COMMISSION

OF THE

PROVINCE OF ONTARIO

FOR THE YEAR ENDED OCTOBER 31st

1917

VOLUME III.

PRINTED BY ORDER OF

THE LEGISLATIVE ASSEMBLY OF ONTARIO

TORONTO:
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1918

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Toronto.

To His Honour, Colonel Sir John Hendrie, K.C.M.G., C.V.O.,

Lieutenant-Governor of Ontario.

May it Please Your Honour:

The undersigned has the honour to present to Your Honour the third volume of the Tenth Annual Report of the Hydro-Electric Power Commission of Ontario for the fiscal year ending October 31st, 1917.

Respectfully submitted,

Adam Beck,

Chairman.

TORONTO, ONT., February 12th, 1918.

COLONEL SIR ADAM BECK, K.B., LL.D.,

Chairman, Hydro-Electric Power Commission,

Toronto, Ont.

SIR,—I have the honour to transmit herewith the third volume of the Tenth Annual Report of the Hydro-Electric Power Commission of Ontario for the fiscal year ending October 31st, 1917.

I have the honour to be,

Sir,

Your obedient servant,

W. W. POPE,

Secretary.

HYDRO-ELECTRIC POWER COMMISSION OF ONTARIO

COLONEL SIR ADAM BECK, K.B., LL.D.

HONOURABLE I. B. LUCAS, M.P.P.

COLONEL W. K. McNAUGHT, C.M.G.

W. W. POPE, Secretary.

F. A. GABY, Chief Engineer.

HYDRAULIC INVESTIGATIONS AND CONSTRUCTION

STREAM FLOW MEASUREMENT

The flow measurements of the streams of the provinces during the year October 1, 1916, to September 30, 1917, have embraced practically the same waters as were under survey during the previous year. The most advantageous section established during the year was that on the Mattagami River, below the plant of the Mattagami Pulp and Paper Company, at Smooth Rock Falls. It is expected that this section will result in better estimates of stream flow for any tributary of the James Bay rivers than any heretofore secured. This is only the first of several rivers in the James Bay slope it is desired to bring under continuous and systematic observation. Unfortunately the work is handicapped at its present stage on account of the necessary reductions coming at a time when the organization for this work was capable for the first time of being in a position to adequately carry it forward.

In being obliged to limit the expenditure to the sum available, the importance of the continuity of records of water elevations will have to be considered greater than the close rating of the sections. This principle, together with the view that winter measurements at sections, where a rating curve is defined, are of more value than open water measurements at such sections, will govern the hydrometric expenditure of the coming year.

The percentage the run-off bears to the precipitation for the purposes of calculation of stream flow is of questionable value for application for other years than the one under consideration for any district. It may, however, be of service for assisting in estimates of flow for that particular year for other streams in the same district, and for this reason the percentage of run-off to precipitation is published for stations where the estimates of flow and precipitation for a whole year are available.

The year for which hydrometric data is published in this report has nothing on record of marked occurrence. The figures of flow for streams in that part of the province draining into the Winnipeg River are in closer agreement than those for any other section of the province. This is to be expected from the larger drainage areas, the weather conditions in winter being less liable to changes affecting the run-off, the uniformly good natural storage basins, and the well rated gauging stations. The weather conditions in the southwestern part of Ontario, in winter, cause fluctuations in the run-off, making close measurement of the latter more difficult than in localities with more fixed winter conditions.

At fifty-seven stations on the rivers of the province the stream flow has been under regular observation, and the data secured for the year is published herewith. For reasons mentioned above, some stations have been withdrawn from the list of those under regular observation. The selection of such stations has been a matter of considerable difficulty, but it is hoped that those finally decided upon will prove to be the ones of least value.

With the object of bringing the publication of stream flow data under the same water year as that adopted by Federal and other sources, the year October 1 to September 30 will be used by the Commission in future publications.

POWER AND STORAGE SURVEYS

General

During the past year a number of detailed surveys in connection with contemplated power construction have been made. In addition, reconnaissances were made at certain locations where there was not sufficient time available or the importance of the work did not justify more extensive surveys. These reconnaissances furnished the necessary information for the preparation of estimates and the compilation of reports on possible developments on the Ottawa River between Lakes Temiskaming and Mattawa, on the Driftwood River at Monteith, on the Sydenham River at Alvinston, and at the Notch on the Montreal River.

With the aid of the information secured in the field and that already available from other sources, estimates have been prepared on these projects. If it is desired to proceed with construction on certain of these at a later date, the additional topographic and hydrographic data can be readily secured.

Meaford

Under date of August 15, 1917, the Commission, on request of the Council of the Municipality of Meaford, authorized the giving of assistance to the town in connection with estimating the cost of a local power development to be located on Big Head Creek. Surveys were therefore initiated in October, covering possible dam sites, power-house site, contours of the storage area above the dam, and a reconnaissance of possible reservoir areas on the upper head waters.

These surveys have now been completed, and the results plotted. Preliminary plans are being prepared on which estimates can be based. On the completion of these plans, estimates of cost will be made and a report drafted for presentation to the municipality.

Nipigon River

In October, 1917, arrangements were made for surveys of the lower power sites on the Nipigon. A party was organized and work was started on October 17th. The results of this work are not yet available. Instructions were issued to this party to make the necessary surveys covering a possible development at Cameron's Pool proper, and also to determine the possibility of developing the total available head at Camp Alexander, which would include the Cameron's Pool proposition. From data now available it is expected that the results of the survey will demonstrate the feasibility of a development combining the several rapids above and below Cameron's Pool under a total head of approximately 117 feet, with a possible ultimate capacity of 100,000 horse-power.

French River

The possible power developments on the French River are three in number, dependent in location on the construction plans of the contemplated Georgian Bay Ship Canal. The proposed scheme of canals entails the construction of three locks between Lake Nipissing and Georgian Bay. The Chaudiere lock will have a lift of 24 feet, the Five Mile lock a lift of 24 feet, and the Dalles lock a lift of 21 feet, making a total available head of 69 feet. With a view to obtaining more adequate data on which to base estimates for contemplated power developments on the river,

surveys were made during the summer of 1917 to supplement the information available in the Georgian Bay Ship Canal Report. These surveys covered the two upper sites at the Chaudiere and the Five Mile Rapids. While no work was done at the Dalles, the field surveys and the later office investigations appear to demonstrate that the most advantageous scheme of development would be to install the Chaudiere development first, then to proceed to the installation for the Dalles site, as the use of the Five Mile site entails the raising of the tailwater level at the Chaudiere by about six feet. The initial development at Chaudiere would therefore be for a head of about 30 feet.

The field surveys at the Chaudiere and the Five Mile sites demonstrated that development at these locations was in both cases quite feasible, and that at the Chaudiere an installation approximating 13,000 horse-power could be made at a reasonable cost under present market conditions.

Trent River Storage

A start has been made on the compilation of the existing data concerning the flow of the waters tributary to the Trent River. The Commission has to date taken few measurements of the flow of these streams, and what data is available is that secured by the officers of the Department of Railways and Canals.

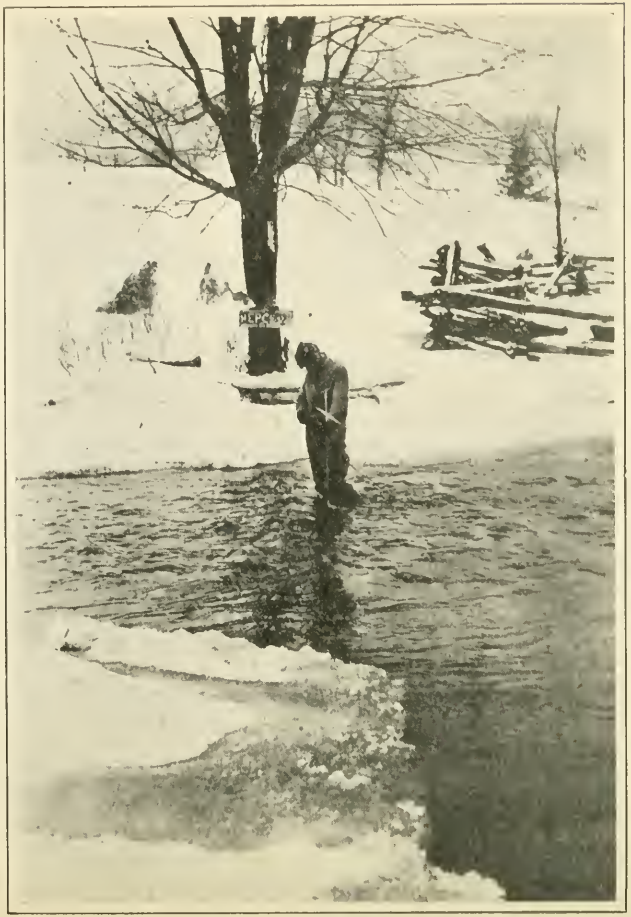
A reconnaissance of the storage sites as yet not developed on the Mississauga River and Jack's Creek has been made and the utility of further storage of the waters on these basins may become apparent when fuller information as to run-off is obtained.

Mississippi River Improvement Co. Arbitration

Upon complaint of the Galetta Electric Light & Power Co., under the terms of The Improvement Company's Act of Incorporation, the Commission held two hearings of parties interested in the charges made against the power owners on the river for storage water supplied by the company's works.

The Commission's engineers, in connection with this investigation, made a trip over the river between Carleton Place and the Ottawa River and also visited the sites of the company's dams on the upper part of the river, besides some possible sites for future reservoir dams.

On the basis of the investigation in the field, and the evidence submitted at the hearings, a set of recommendations was prepared covering what was considered to be a fair and practicable method of adjusting and regulating tolls for storage water on the Mississippi River.



Metering Section Showing Winter Conditions on the Beaver River near Kimberley.

Metering Section Showing Winter Conditions on the Saugeen River near Port Elgin.

Regular Stations

EASTERN ONTARIO DISTRICT

River	Location	Drainage Area Sq. Miles	Township	County or District
Black	near Washago	585	Rama	Ontario
Bonnechere	at Renfrew	910	Horton	Renfrew
Madawaska	at Claybank	3,210	McNab	"
"	at Madawaska	800	Murchison	"
Maganetawan, north.	near Burk's Falls	107	Armour	Parry Sound
" south.	" " "	257	"	"
Mississippi	at Ferguson's Falls	1,042	Drummond	Renfrew
"	at Galetta	1,456	Fitzroy	Carleton
"	near Snow Road	446	Sherbrooke	Lanark
Moira	near Foxboro	1,038	Thurlow	Hastings
Muskoka, north	near Port Sydney	560	Stephenson	Muskoka.
" south	at Tretheway's Falls	668	Draper	"
Napanee	near Napanee	300	Camden	Addington
Petawawa	near Petawawa	1,572	Petawawa	Renfrew
Seguin	near Parry Sound	380	McDougall	Parry Sound
Tay	near Glen Tay	204	Bathurst	Lanark
York	near Bancroft	374	Faraday	Hastings

Black River near Washago

Location—At the highway bridge known as Kennedy's Bridge, about 5 miles southeast of the Town of Washago, on lot 1, concession G, Township of Rama, County of Ontario.

Records Available—Discharge measurements at first bridge from August, 1913, to January, 1914. Discharge measurements at Kennedy's Bridge from February, 1914, and daily gauge heights from May 5, 1915.

Drainage Area—585 square miles.

Gauge—Vertical staff 0 to 12 feet on tree on left bank. Water elevations referred to a B.M. (elevation 30.00) on tie rod on downstream side of bridge.

Channel and Control—The channel is straight for 150 feet above and 700 feet below the gauging section. The banks and control can be considered permanent, as the velocity here is never very high. The bed of the stream is composed of rock.

Discharge Measurements—Made from the bridge and wading section at low water.

Winter Flow—Owing to the somewhat sluggish flow at this section, ice from December to March forms to a great thickness, and relation of gauge height to discharge is seriously affected during that period. Measurements are made to determine the winter flow.

Regulation—The flow at this section during May, June and July is controlled to a large extent by logging dams above. The operation of gates at these dams causes fluctuations in gauge heights, amounting to several feet at the gauge. At times logs lodge below section, causing considerable backwater.

Accuracy—For three months in the early summer the river stage is subject to large fluctuations, and the accuracy of the discharge depends upon accuracy of mean daily gauge heights. Rating curve not well defined at all stages.

Observer—Pearl Carrick, Washago.

Discharge Measurements of Black River near Washago in 1916-7

Date	Hydrographer	Width in Feet	Area of Section in Sq. Feet	Mean Velocity in Feet per Sec.	Gauge Height in Feet	Discharge in Sec-Feet	Discharge in Second-feet per Square Mile
1916							
Oct. 3....	Yeates, W.	31	43	1.09	19.80	47	.....
1917							
Jan. 4....	Roberts, E.	119	580	1.18	23.00	688 (a)	.....
Feb. 19...	"	95	350	.58	21.79	201 (b)	.....
Mar. 22....	"	95	372	.78	22.00	290 (b)	.....
April 10....	"	119	1,262	3.10	28.42	3,914 (c)	.....
May 10....	Campbell, L. L..	119	796	2.00	24.42	1.589	.....
June 20....	" ..	119	543	.81	22.33	438	.....
July 26....	Ronald. F.....	119	436	.69	21.58	299	.....
Aug. 24....	"	98	401	.40	21.00	161	.....
Sept. 26....	"	48	66	1.32	20.02	87(d)	.....

(a) Ice measurement. Some velocities estimated.
(b) Ice measurement.
(c) Surface velocities recorded and co-efficient applied. Debris made vertical observations impossible.
(d) Reading taken at wading section 500 feet above gauge.

Daily Gauge Height and Discharge of Black River near Washago, for 1916-7

Drainage Area 585 Square Miles

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge
	Feet	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*
1	19.92	51	22.44	575	23.77	1150	23.90	1140	22.38	330	21.87	220	28.33	3880	24.48	1560	23.46	1000	21.90	390	21.25	220	20.71	128
2	19.90	50	22.61	645	23.81	1180	23.37	860	22.38	330	21.87	222	28.67	4080	24.48	1560	23.71	1120	21.52	280	21.83	369	20.69	126
3	19.88	49	22.73	690	23.69	1110	23.15	800	22.33	345	21.85	222	28.82	4170	24.50	1570	23.42	980	21.73	339	22.13	459	20.67	124
4	19.83	47	22.79	715	23.56	1050	22.85	685	22.33	345	21.85	222	28.97	4260	24.42	1520	23.73	1130	21.98	414	22.00	420	20.63	119
5	19.79	46	22.85	740	23.94	1240	22.75	640	22.33	345	21.77	204	29.12	4350	24.54	1590	23.48	1010	22.14	462	21.92	396	20.60	116
6	19.73	43	22.83	730	24.58	1620	22.71	620	22.33	345	21.79	206	29.12	4350	24.77	1730	24.04	1290	22.06	438	21.79	357	20.60	116
7	19.71	42	22.79	715	24.60	1630	22.90	600	22.17	288	21.77	200	29.10	4340	24.56	1610	23.46	1000	22.19	477	21.71	333	20.56	112
8	19.71	42	22.81	725	24.46	1550	22.75	560	21.98	240	21.75	198	29.06	4320	24.67	1670	23.29	915	22.38	550	21.60	300	20.52	107
9	19.79	46	22.79	715	24.42	1520	22.56	480	21.96	230	21.85	220	28.81	4170	24.56	1610	22.88	750	22.54	615	21.69	327	20.50	105
10	19.79	46	22.96	785	24.71	1700	22.65	475	21.96	230	21.85	220	28.46	3960	24.46	1550	22.58	630	22.50	600	21.72	336	20.46	101
11	19.73	43	23.14	855	24.69	1650	22.71	500	21.96	230	21.85	220	27.71	3510	24.35	1480	22.44	575	22.98	790	21.65	315	20.46	101
12	19.71	42	23.25	900	24.67	1630	22.71	505	21.87	210	21.87	224	27.48	3370	24.27	1430	22.31	525	23.02	810	21.56	290	20.42	97
13	19.73	43	23.27	910	24.60	1590	22.54	420	21.89	230	21.83	216	27.19	3190	24.14	1350	22.21	484	22.94	775	21.46	265	20.40	95
14	19.90	50	23.11	845	24.37	1450	22.58	429	21.85	220	21.85	220	26.73	2920	24.17	1370	22.13	459	23.17	870	21.40	250	20.42	97
15	20.13	62	22.96	785	24.62	1590	22.46	396	21.85	220	21.87	220	26.17	2580	24.02	1280	22.21	484	23.21	885	21.33	236	20.40	95
16	20.19	65	22.98	790	24.92	1770	22.46	396	21.83	214	21.83	216	25.71	2310	24.04	1290	22.15	465	23.00	800	21.27	224	20.37	93
17	20.60	100	22.87	750	25.06	1840	22.46	399	21.77	200	21.90	230	25.44	2130	24.17	1370	22.12	456	22.71	685	21.25	220	20.40	95
18	20.94	141	22.79	715	24.98	1780	22.42	381	21.81	210	22.02	255	25.19	1980	24.44	1530	22.04	432	22.50	600	21.21	212	20.40	95
19	21.08	170	22.69	675	24.75	1670	22.37	375	21.77	200	22.08	275	25.21	2000	23.83	1190	22.08	444	22.46	585	21.21	212	20.35	91
20	21.87	381	22.61	645	24.77	1670	22.37	375	21.81	210	22.02	262	25.27	2030	23.31	925	22.19	477	22.25	500	21.21	212	20.33	89
21	22.90	755	22.52	610	24.71	1640	22.29	360	21.79	210	22.02	265	25.29	2040	23.14	855	22.12	456	22.08	444	21.17	204	20.29	86
22	23.08	835	22.40	560	24.71	1650	22.29	357	21.73	196	22.10	278	25.54	2200	23.29	915	22.21	484	21.97	411	21.12	194	20.25	84
23	22.96	780	22.36	545	24.77	1670	22.29	354	21.79	210	22.31	339	25.62	2250	23.50	1020	21.92	396	21.60	300	21.10	190	20.25	84
24	22.67	660	22.61	645	24.75	1660	22.29	354	21.85	220	22.58	435	25.77	2340	23.54	1040	22.02	426	21.63	309	21.06	182	20.17	78
25	22.50	595	22.61	645	24.89	1730	22.29	351	21.81	210	23.08	620	25.79	2350	23.75	1150	22.12	456	21.65	315	21.04	178	20.08	74
26	22.46	580	22.58	630	24.90	1740	22.29	351	21.89	230	24.25	1420	25.73	2320	23.73	1130	22.12	456	21.58	295	21.04	178	20.15	78
27	22.42	565	22.54	615	24.98	1780	22.29	348	21.94	240	28.00	3680	25.56	2210	23.60	1070	22.00	420	21.48	270	21.02	174	19.94	67
28	22.52	600	22.67	670	24.71	1600	22.29	342	21.92	230	28.10	3740	25.14	1950	23.75	1150	21.85	375	21.38	246	20.94	161	20.04	72
29	22.52	600	22.71	685	24.37	1390	22.29	330	.....	.....	28.20	3800	24.77	1730	23.52	1030	21.71	333	21.35	240	20.94	161	20.11	80
30	22.56	615	23.36	950	24.31	1370	22.38	330	.....	.....	28.30	3860	24.46	1550	23.46	1000	21.88	384	21.27	224	20.85	148	20.15	78
31	22.52	600	.....	.....	24.21	1310	22.38	330	.....	.....	28.46	3960	.....	.....	23.29	915	.....	.....	21.18	206	20.75	134	.....	.....

Monthly Discharge of Black River near Washago for 1916-7

Drainage Area, 585 Square Miles

Month	Discharge in Second-feet			Discharge in Second-feet per Square Mile			Run-off
	Maximum	Minimum	Mean	Maximum	Minimum	Mean	Depth in Inches on Drainage Area
October (1916)..	835	42	282	1.43	.07	.48	.55
November " ..	950	545	715	1.62	.93	1.22	1.36
December " ..	1,840	1.110	1,546	3.15	1.90	2.64	3.04
January .. (1917)	1,140	330	479	1.95	.56	.82	.95
February	345	196	247	.59	.34	.42	.44
March	3,960	198	867	6.77	.34	1.48	1.71
April	4,350	1,550	2,961	7.44	2.65	5.06	5.64
May	1,730	915	1,305	2.96	1.56	2.23	2.57
June.....	1,290	333	627	2.21	.57	1.07	1.19
July	885	206	488	1.51	.35	.83	.96
August	459	134	253	.79	.23	.43	.50
September	128	67	96	.22	.11	.16	.18
The year.....	4,350	42	824	7.44	.07	1.41	19.12

Bonnechere River at Renfrew

Location—One-half mile below Raglan St., Town of Renfrew, Township of Horton, County of Renfrew, on the Barnett Estate.

Records Available—Discharge measurements from September, 1916. Daily gauge readings from November 1, 1916.

Drainage Area—910 square miles.

Gauge—On the right bank of the river at the section, a box chain gauge with nine feet of standard gauge plates. Distance from end of weight to marker is 12.43 feet.

Channel and Control—The channel is straight for 100 feet above and 300 feet below the station, but both above and below the station long sharp curves occur. There is a high clay bank on the right, and a low clay bank on the left. At extreme high water there may be an escape from this channel of some water from higher above the section to points below the section. The bed of the stream is composed of clean small stones.

Winter Flow—Little ice effect expected, though on occasions frazil ice from the rapids above may make meter measurements difficult.

Regulation—The Round Lake Dam, the Golden Lake Dam for power purposes, and the dams on the upper river for lumbering purposes have large regulating effects on this river. The power plants in Renfrew, running twenty-four hours to their full capacity, and having little pondage, will not seriously affect the estimate of mean gauge heights.

Observer—R. Dalton, Renfrew.

Discharge Measurements of Bonnechere River at Renfrew in 1916-7

Date	Hydrographer	Width in Feet	Area of Section in Sq. Feet	Mean Velocity in Feet per Sec.	Gauge Height in Feet	Discharge in Sec-Feet	Discharge in Second-feet per Square Mile
1916							
Oct. 26....	McLennan, C. C.	81	134	1.90	102.81	254	.....
Nov. 15....	Campbell, L.L..	142	123	1.82	102.58	223	.....
Dec. 12....	" ..	147	138	1.83	102.71	252	.....
1917							
Jan. 20....	" ..	130	255	1.62	103.48	435(a)	.....
Feb. 21....	" ..	130	168	1.64	103.07	277(b)	.....
" 21....	" ..	130	229	1.73	103.34	396(b)	.....
Mar. 15....	" ..	140	166	2.33	102.93	387 (c)	.....
" 22....	" ..	147	208	2.31	103.32	479(c)	.....
April 20....	" ..	121	757	2.96	104.33	2,242(d)	.....
May 10....	Hatton	121	722	2.62	104.08	1,889(d)	.....
July 8....	"	136	271	3.08	103.42	833	.....
" 16....	Ronald, F.....	125	212	2.10	102.96	466	.....
Aug. 9....	"	121	159	1.70	102.75	270	.....
Sept. 11....	"	120	177	1.57	102.75	279	.....
Oct. 15....	Hatton, M	121	186	1.74	102.89	324	.....

(a) Ice effect.
(b) Ice measurement.
(c) Some ice at edge of section.
(d) Reading taken at high-water section 1,500 feet below gauge.

Daily Gauge Height and Discharge of Bonnechere River at Renfrew for 1916-7

Drainage Area, 910 Square Miles

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge
	Feet	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*
1	102.54	209	102.29	161	102.62	230	102.40	162	103.00	290	103.42	496	104.50	2510	104.13	1940	103.48	935	103.15	520	102.73	263	102.64	235
2	102.41	182	102.50	200	102.54	210	102.58	196	103.50	670	103.50	560	104.38	2310	104.15	1970	103.48	935	103.08	464	102.71	256	102.73	263
3	102.54	209	102.50	200	102.35	171	102.56	192	103.58	780	103.50	560	104.60	2660	104.17	2000	103.17	535	103.08	464	102.71	256	102.56	214
4	102.41	182	102.33	167	102.60	224	102.67	217	102.71	202	103.25	370	104.40	2350	104.17	2000	103.27	635	103.08	464	102.67	244	102.83	305
5	102.27	159	102.12	142	102.65	238	102.73	232	103.69	960	103.40	480	104.42	2380	104.15	1970	103.25	615	103.08	464	102.71	256	102.79	286
6	102.41	182	102.42	184	102.77	279	102.75	238	103.35	520	103.42	496	104.31	2220	104.13	1940	103.25	615	103.10	480	102.73	263	102.71	256
7	102.54	209	102.42	184	102.73	263	102.65	212	103.19	394	103.40	480	104.08	1850	104.10	1890	103.25	615	103.06	448	102.73	263	102.75	271
8	102.54	209	102.62	230	102.71	256	102.96	320	103.00	290	103.15	315	104.25	2120	104.10	1890	.....	665	102.98	388	102.73	263	102.69	249
9	102.65	237	102.58	219	102.62	230	102.83	263	103.42	580	103.08	282	104.15	1970	104.08	1850	103.33	715	102.98	388	102.75	271	102.42	184
10	102.54	209	102.54	210	102.56	214	103.00	340	103.48	650	103.02	260	104.02	1770	104.08	1850	103.33	715	102.83	305	102.73	263	102.75	271
11	102.41	182	102.50	200	102.73	263	103.06	376	102.98	282	103.00	252	104.15	1970	104.08	1850	103.33	715	102.75	271	102.67	244	102.75	271
12	102.54	209	102.52	205	102.69	249	103.17	456	103.65	900	103.08	282	104.08	1850	104.02	1770	103.25	615	102.90	340	102.54	210	102.77	279
13	102.41	182	102.54	210	102.67	217	103.42	700	103.60	825	103.15	370	104.08	1850	103.98	1700	103.33	715	102.90	340	102.73	263	102.75	271
14	102.65	237	102.62	230	102.60	200	103.00	340	103.42	580	103.08	330	104.08	1850	103.90	1590	103.33	715	102.92	352	102.73	263	102.75	271
15	102.65	237	102.58	219	102.60	200	103.46	760	103.50	670	102.99	335	104.04	1800	103.83	1480	103.25	615	102.92	352	102.71	256	102.67	244
16	102.74	268	102.56	214	102.60	200	103.35	615	103.46	625	103.00	340	104.10	1890	103.77	1390	103.17	535	103.02	416	102.67	244	102.71	256
17	102.54	209	102.58	219	102.90	290	103.29	472	103.25	440	103.67	1240	104.10	1890	103.77	1390	103.25	615	102.94	364	102.69	249	103.08	464
18	102.65	237	102.60	224	102.85	271	102.94	267	102.96	275	103.50	975	104.10	1890	103.73	1330	103.31	685	102.96	376	102.67	244	103.06	448
19	102.74	268	102.21	151	102.73	232	103.50	670	103.40	560	103.02	416	104.23	2090	103.73	1330	103.31	685	102.94	364	102.50	200	103.06	448
20	102.74	268	102.58	219	103.02	352	103.48	650	103.40	560	103.08	464	104.31	2220	103.71	1300	103.31	685	102.92	352	102.71	256	103.00	400
21	102.74	268	102.62	230	102.73	232	102.96	275	103.35	440	103.00	400	104.38	2310	103.69	1270	103.33	715	102.93	358	102.81	295	102.92	352
22	102.54	209	102.62	230	102.73	232	103.31	488	103.38	464	102.94	364	104.33	2250	103.60	1130	103.31	685	102.79	286	102.71	256	102.83	305
23	102.65	237	102.58	219	103.10	400	102.94	267	103.33	424	102.92	352	104.31	2220	103.65	1200	103.31	685	102.64	235	102.64	235	102.67	244
24	102.54	209	102.60	224	102.85	271	102.81	227	103.17	325	103.54	1040	104.23	2090	103.67	1240	103.17	535	102.79	286	102.75	271	102.86	320
25	102.65	237	102.52	205	102.67	217	102.63	186	102.92	230	103.46	915	104.06	1830	103.73	1330	103.08	464	102.75	271	102.73	263	102.83	305
26	102.54	209	102.42	184	102.90	290	102.94	267	103.50	560	104.98	3230	104.17	2000	103.75	1360	103.08	464	102.71	256	102.56	214	102.83	305
27	102.54	209	102.60	224	102.77	244	103.00	290	103.42	496	108.52	8660	104.17	2000	103·65	1200	103.04	432	102.71	256	102.73	263	102.83	305
28	102.54	209	102.56	214	102.69	222	102.38	148	103.40	480	108.60	8780	104.15	1970	103.65	1200	103.15	520	102.67	244	102.67	244	102.85	315
29	102.54	209	102.58	219	102.71	227	102.96	275	.....	....	104.75	2890	104.15	1970	103.58	1090	103.10	480	102.50	200	102.60	224	102.79	286
30	102.54	209	102.58	219	102.73	232	102.92	260	.....	....	104.25	2120	104.13	1940	103.54	1040	103.19	550	102.67	244	102.73	263	102.71	256
31	102.65	237	.....	....	102.33	154	103.02	300	.....	....	104.19	2030	.....	....	103.50	975	.....	....	102.71	256	102.73	263	.....	....

Monthly Discharge of Bonnechere River at Renfrew for 1916-7

Drainage Area, 910 Square Miles

Month	Discharge in Second-feet			Discharge in Second-feet per Square Mile			Run-off
	Maximum	Minimum	Mean	Maximum	Minimum	Mean	Depth in Inches on Drainage Area
October (1916)	268	159	217	.29	.17	.24	.28
November "	230	142	205	.25	.16	.23	.26
December "	400	154	242	.44	.17	.27	.31
January (1917)	760	148	344	.84	.16	.38	.44
February	960	202	519	1.05	.22	.57	.59
March	8,780	252	1,293	9.65	.28	1.42	1.64
April	2,660	1,770	2,067	2.92	1.95	2.27	2.53
May	2,000	975	1,531	2.20	1.07	1.68	1.94
June	935	432	636	1.03	.47	.70	.78
July	520	200	349	.57	.22	.38	.44
August	295	200	252	.32	.22	.28	.32
September	464	184	296	.51	.20	.33	.37
The year	8,780	142	662	9.65	.16	.73	9.87

Madawaska River at Claybank

Location—Near lot 7, concession 9, Township of McNab, County of Renfrew, half mile below Flat Rapids.

Records Available—High-water measurements during 1915 and 1916 to be used in conjunction with low-water measurements at this section for application to gauge readings taken at Claybank by the Ottawa River Storage Survey, from April 15, 1909. Discharge measurements commenced in October, 1916, at this section, and September, 1915, at high-water section.

Drainage Area—3,210 square miles.

Gauge—Nine feet of standard gauge plates on pier of Claybank bridge 500 feet below high-water section.

Channel and Control—Channel is straight for 3,000 feet above and 500 feet below the station and favorably fast current exists for metering purposes. Clay and gravel banks, high on the right bank, medium, to low on the left bank, but the river is not liable to overflow. The flow is through one channel at high and low stages and through two channels at medium stages. Possibly frazil ice may be expected on some days.

Discharge Measurements—From boat and ice.

Winter Flow—Gauge height discharge relation will be considerably affected by ice, but likely to be capable of close estimation from discharge measurements.

Regulation—There are no powers developed on the river as yet, though construction has started on one at the foot of Calabogie Lake, which will have considerable regulating effect on the river below, but possibly not acting rapidly enough to disturb the gauge height discharge daily estimate. The storage works for lumbering purposes on the upper river and its tributaries are still in use.

Observer—Mrs. Ed. Jandreau, R. R. Arnprior.

Discharge Measurements of Madawaska River at Claybank in 1916-7

Date	Hydrographer	Width in Feet	Area of Section in Sq. Feet	Mean Velocity in Feet per Sec.	Gauge Height in Feet	Discharge in Sec-Feet	Discharge in Second-feet per Square Mile
1916							
Oct. 12....	Campbell, L. L ..	230	2,085	.56	260.27	1,176	.....
1917							
Feb. 26....	" ...	300	4,307	.49	261.13	2.123(a)	.....
Apr. 30....	Hatton	370	6,218	1.82	264.97	11,259(b)	.....
" 30....	"	349	6,256	1.81	264.97	11,307	.....
May 28....	Campbell, L. L...	333	5,334	1.22	262.27	5,452	.....
June 18....	Hatton	329	5,200	.91	261.85	4,753	.....
July 17....	Ronald. F	329	4,726	.53	260.98	2,485	.....
Sept. 10..	"	293	1,824	.39	259.85	708(c)	.....
Oct. 18....	"	224	1,708	.17	259.44	284(c)	.....

(a) Ice measurement.
(b) Reading taken 100 feet below regular section.
(c) Readings taken at low water section.

Daily Gauge Height and Discharge of Madawaska River at Claybank, for 1916-7

Drainage Area, 3,210 Square Miles

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge
	Feet	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*
1	260.12	1050	260.54	1780	260.79	.....	261.36	....	261.04	.....	261.04	.....	264.44	10320	264.55	10560	262.21	5410	261.19	3170	260.83	2380	259.98	855
2	260.12	1050	260.54	1780	260.77	.....	261.36	....	261.04	.....	261.04	.....	264.60	10670	264.50	10450	262.19	5370	261.19	3170	260.79	2290	259.98	855
3	260.12	1050	260.54	1780	260.79	.....	261.36	....	261.04	. .	261.04	.....	264.85	11220	264.41	10250	262.31	5630	261.15	3080	260.69	2080	259.98	855
4	260.21	1180	260.54	1780	260.83	.....	261.33	....	261.02	.....	261.09	.....	264.94	11420	264.31	10030	262.23	5460	261.15	3080	260.64	1980	259.89	740
5	260.21	1180	260.54	1780	260.86	.....	261.27	....	261.02	.....	261.13	.....	264.69	10870	264.20	9790	262.19	5370	261.10	2970	260.60	1900	259.89	740
6	260.21	1180	260.54	1780	260.92	.....	261.27	....	261.11	.....	261.13	.....	264.60	10670	263.98	9310	262.19	5370	261.06	2880	260.60	1900	259.85	695
7	260.21	1180	260.54	1780	260.86	.....	261.29	....	261.11	.....	261.13	.....	264.69	10870	263.92	9170	262.10	5170	261.06	2880	260.56	1820	259.85	695
8	260.12	1050	260.54	1780	260.83	.....	261.29	....	261.04	.....	261.11	.....	264.60	10670	263.82	8950	262.10	5170	261.02	2790	260.56	1820	259.85	695
9	260.12	1050	260.54	1780	260.92	.....	261.34	....	261.04	.....	261.11	.....	264.52	10490	263.71	8710	261.98	4910	260.98	2710	260.56	1820	259.85	695
10	260.12	1050	260.54	1780	260.94	.....	261.34	....	260.96	.....	261.06	.....	264.44	10320	263.62	8510	262.10	5170	260.98	2710	260.52	1740	259.85	695
11	260.12	1050	260.54	1780	261.02	.....	261.38	....	260.96	.....	261.09	.....	264.35	10120	263.54	8340	262.14	5260	260.98	2710	260.52	1740	259.85	695
12	260.12	1050	260.54	1780	261.13	.....	261.38	....	261.00	.....	261.13	.....	264.27	9940	263.40	8030	262.14	5260	260.94	2620	260.48	1660	259.85	695
13	260.12	1050	260.54	1780	261.21	.....	261.38	....	261.00	.....	261.13	.....	264.19	9770	263.40	8030	262.06	5080	260.95	2640	260.27	1280	259.79	630
14	259.96	830	260.69	2080	261.23	.....	261.38	....	261.04	.....	261.13	.....	264.02	9390	263.29	7790	262.06	5080	260.85	2420	260.23	1220	259.69	520
15	259.96	830	260.69	2080	261.29	.....	261.38	....	261.04	.....	261.09	.....	263.94	9220	263.19	7570	261.98	4910	260.85	2420	260.23	1220	259.69	520
16	259.96	830	260.69	2080	261.29	.....	261.38	....	261.09	.....	261.09	.....	263.85	9020	263.05	7260	261.94	4820	260.85	2420	260.19	1160	259.69	520
17	259.96	830	260.69	2080	261.38	.....	261.36	....	261.04	.....	261.02	.....	263.77	8840	262.89	6910	261.89	4710	260.89	2510	260.19	1160	259.69	520
18	259.96	830	260.69	2080	261.38	.....	261.29	....	261.00	.....	261.02	.....	263.77	8840	262.78	6670	261.85	4620	260.94	2620	260.19	1160	259.65	480
19	259.96	830	260.69	2080	261.38	.....	261.21	....	261.04	.....	261.00	.....	263.98	9310	262.56	6180	261.62	4110	260.89	2510	260.31	1340	259.65	480
20	259.96	830	260.69	2080	261.29	.....	261.21	....	261.04	.....	261.00	.....	264.19	9770	262.56	6180	261.56	3980	260.94	2620	260.19	1160	259.60	430
21	260.04	935	260.69	2080	261.38	.....	261.21	....	261.11	.....	260.96	.....	264.19	9770	262.51	6070	261.56	3980	261.02	2790	260.15	1100	259.60	430
22	260.12	1050	260.69	2080	261.38	.....	260.96	....	261.04	.....	260.94	.....	264.60	10670	262.42	5870	261.52	3890	260.98	2710	260.10	1020	259.65	480
23	260.21	1180	260.71	2120	261.42	.....	260.96	....	261.04	.....	261.00	.....	264.85	11220	262.37	5760	261.52	3890	260.94	2620	260.15	1100	259.65	480
24	260.29	1300	260.75	2200	261.42	.....	261.21	....	261.06	.....	261.02	.....	264.94	11420	262.27	5540	261.48	3810	260.94	2620	260.15	1100	259.58	414
25	260.38	1460	260.83	2380	261.33	.....	261.21	....	261.09	.....	260.94	.....	264.85	11220	262.31	5630	261.39	3610	260.98	2710	260.10	1020	259.58	414
26	260.46	1620	260.83	2380	261.33	.....	261.04	....	261.13	.....	261.04	.....	264.77	11040	262.31	5630	261.35	3520	260.98	2710	260.10	1020	259.52	366
27	260.54	1780	260.83	2380	261.38	.....	261.04	....	261.09	.....	261.13	.....	264.69	10870	262.31	5630	261.31	3430	260.94	2620	260.10	1020	259.52	366
28	260.54	1780	260.83	2380	261.38	.....	261.13	....	261.09	.....	262.27	.....	264.65	10780	262.27	5540	261.27	3340	260.94	2620	260.10	1020	259.48	334
29	260.54	1780	260.86	2440	261.44	.....	261.13	....	.....	.....	262.94	.....	.....	10670	262.23	5460	261.27	3340	260.94	2620	260.02	910	259.52	366
30	260.54	1780	260.88	2490	261.36	.....	261.13	....	.....	.....	263.77	.....	.....	10670	262.22	5430	261.23	3260	260.89	2510	259.98	855	259.56	398
31	260.54	1780	.....	.....	261.36	.....	261.13	....	.....	.....	264.31	.....	.....	.....	262.23	5460	.....	.....	260.89	2510	259.98	855	.....	.....

NOTE.—As there was only one measurement obtained no attempt has been made to estimate the winter flow (Dec., Jan., Feb., March).

Monthly Discharge of Madawaska River at Claybank for 1916-7

Drainage Area, 3,210 Square Miles

Month	Discharge in Second-feet			Discharge in Second-feet per Square Mile			Run-off
	Maximum	Minimum	Mean	Maximum	Minimum	Mean	Depth in Inches on Drainage Area
October ...(1916)	1,780	830	1,175	.55	.26	.37	.43
November. "	2,490	1,780	2,021	.78	.55	.63	.70
December "	.....	.....	.....	.....	.....	.....	.....
January ..(1917)	.....	.....	.....	.....	.....	.....	.....
February	.....	.....	.....	.....	.....	.....	.....
March	.....	.....	.....	.....	.....	.....	.....
April	11,420	8,840	10,336	3.56	2.75	3.22	3.59
May	10,560	5,430	7,442	3.29	1.69	2.32	2.67
June	5,630	3,260	4,564	1.75	1.02	1.42	1.58
July	3,170	2,420	2,709	.99	.75	.84	.97
August	2,380	855	1,415	.74	.27	.44	.51
September	855	334	569	.27	.10	.18	.20
The year	11,420	334	3,769	3.56	.55	1.17	10.65

Madawaska River at Madawaska

Location—50 feet above the G.T. Ry. bridge, Canada Atlantic branch, 500 yards east of the Madawaska Station, Township of Murchison, District of Nipissing.

Records Available—Discharge measurements from September, 1915, and monthly thereafter, and gauge readings from September 27, 1915.

Drainage Area—800 square miles.

Gauge—Three feet of standard gauge plates secured vertically to pile, three feet west of face of east abutment.

Channel and Control—Channel is straight for about 400 feet above the section, curving slightly to the right under the bridge. The banks are sandy, and not liable to overflow. The bed of the river is soft, and there are some weeds above the section. The point of control is not clearly defined.

Discharge Measurements—Made about fifty feet above gauge from a boat.

Winter Flow—Affected by ice conditions.

Regulation—Lumber interests on the river above the section operate dams for driving purposes.

Accuracy—Open water rating curve for ordinary stages changing slightly.

Observer—G. Wormke, Madawaska.

Discharge Measurements of Madawaska River at Madawaska in 1916-7

Date	Hydrographer	Width in Feet	Area of Section in Sq. Feet	Mean Velocity in Feet per Sec.	Gauge Height in Feet	Discharge in Sec-Feet	Discharge in Second-feet per Square Mile
1916							
Oct. 27....	Campbell, L. L. .	79	498	.54	102.25	267	.....
Dec. 13....	" ..	96	779	.74	105.46	579 (a)	.....
1917							
Jan. 30....	" ..	84	496	.83	103.25	410 (b)	.....
Feb. 23....	Hatton	75	410	.52	102.58	212 (b)	.....
Mar. 9....	"	75	402	.54	102.50	216 (b)	.....
Apr. 17....	Campbell, L. L..	111	1,062	1.67	106.50	1,774	.....
June 22....	Hatton	87	711	1.11	104.19	786	.....
July 28....	"	85	638	1.06	103.71	677	.....
Aug. 22....	Ronald, F.....	82	456	.64	101.87	293	.....
Sept. 27....	Hatton, M	74	472	.35	101.08	169	.....
Oct. 26....	Ronald, F.....	78	513	.65	102.08	336	.....

(a) Some ice at gauge.
(b) Ice measurement.

Daily Gauge Height and Discharge of Madawaska River at Madawaska, for 1916-7.

Drainage Area, 800 Square Miles.

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge
	Feet	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*
1	101.46	207	102.33	336	103.40	440	104.54	394	103.19	260	102.58	213	106.08	1350	109.08	2500	105.54	1170	103.46	610	103.52	625	101.50	236
2	101.42	202	102.33	336	103.31	426	104.38	394	103.17	276	102.58	213	106.58	1530	109.00	2470	105.33	1100	103.43	600	103.44	605	101.44	226
3	101.35	192	102.33	336	103.29	426	104.15	340	103.13	272	102.52	217	108.88	2420	108.88	2420	105.17	1060	103.35	585	103.29	570	101.42	223
4	101.27	181	102.33	336	103.25	418	104.04	325	103.08	287	102.50	224	108.92	2440	108.75	2370	105.00	1010	103.33	580	103.19	550	101.42	223
5	101.25	178	102.29	330	103.33	426	104.00	317	103.08	287	102.48	223	108.63	2320	108.42	2240	105.00	1010	103.40	595	102.92	494	101.42	223
6	101.23	175	102.29	330	103.75	498	104.00	317	103.08	287	102.46	213	108.13	2130	108.08	2110	105.17	1060	103.48	615	102.81	472	101.40	220
7	101.17	167	102.25	324	103.77	500	104.00	317	103.00	272	102.50	217	107.71	1960	107.83	2010	105.17	1060	103.48	615	102.73	456	101.42	223
8	101.17	167	102.29	330	103.83	490	104.00	317	103.00	272	102.50	217	107.42	1850	107.54	1900	105.38	1120	103.56	635	102.56	422	101.37	215
9	101 17	167	102.46	356	104.67	610	103.90	302	103.00	287	102.50	220	107.25	1780	107.50	1880	105.46	1150	103.65	655	102.50	410	101.35	212
10	101.17	167	103.12	461	104.71	600	103.83	287	103.00	287	102.48	216	107.04	1710	107.33	1810	105.37	1120	103.67	660	102.52	414	101.33	209
11	101.17	167	103.54	530	104.67	585	103.73	276	103.00	287	102.50	217	107.00	1690	107.04	1710	105.21	1070	103.58	640	102.35	383	101.33	209
12	101.15	164	103.35	458	104.67	540	103.56	250	103.00	287	102.48	216	107.00	1690	106.67	1560	105.08	1036	103.58	640	102.23	361	101,27	200
13	101.19	170	103.29	442	105.54	575	103.50	250	102.92	275	102.58	227	107.00	1690	106.46	1490	104.87	970	103.58	640	101,96	312	101.25	197
14	101.25	178	103.04	410	106.08	640	103.50	242	102.79	257	102.83	272	106.71	1570	106.15	1380	104.79	945	103.71	670	101.92	305	101.25	197
15	101.25	178	102.88	378	106.29	650	103.50	242	102.67	235	102.82	272	106.67	1560	105.08	1030	104.77	940	103.79	690	101.92	305	101.25	197
16	101.25	178	102.83	362	106.29	650	103.50	242	102.60	227	102.83	272	106.63	1550	104.50	865	104.54	875	103.83	695	101.92	305	101.25	197
17	101.58	224	102.83	362	106.17	670	103.50	242	102.58	227	102.83	272	106.58	1530	104.46	855	104.50	865	103.83	695	101.92	305	101.25	197
18	101.69	240	102.73	353	106.00	650	103.46	227	102.56	220	102.83	272	107.17	1750	104.60	895	104.44	850	104.33	820	101.92	305	101.21	191
19	101.67	238	102.65	338	106.00	650	103.35	213	102.50	213	102.77	272	107.54	1900	104.65	910	104.31	815	104.33	820	101.92	305	101.21	191
20	102.17	313	102.56	322	105.83	610	103.31	213	102.52	213	102.75	275	108.46	2250	104.79	945	104.30	810	104.40	840	101.92	305	101.21	191
21	102.54	368	102.46	310	105.56	575	103.25	199	102.58	213	102.75	276	109.50	2660	104.75	935	104.23	795	104.19	785	101.92	305	101.19	189
22	102.69	392	102.75	326	105.58	540	103,27	199	102.56	213	102.73	287	110.04	2880	104.79	945	104.22	790	104.23	795	101.88	299	101.17	186
23	102.35	339	102.35	269	105.25	505	103.33	213	102.58	213	102.75	302	110.29	2980	104.42	845	104.13	770	104.13	770	101.83	290	101.17	186
24	102.27	328	102.42	272	105.25	505	103.33	213	102.54	209	102.88	332	110.08	2890	106.08	1350	104.00	740	104.25	800	101.79	283	101.17	186
25	102.17	313	102.62	332	105.38	540	103.33	213	102.50	206	103.21	410	110.08	2890	106.29	1430	103.88	710	104.13	770	101.65	260	101.17	186
26	102.23	321	104.62	650	105.27	515	103.33	212	102.56	213	103.67	555	110.25	2960	106.17	1380	103.71	670	104.08	755	101.54	242	101.10	176
27	102.24	323	104.50	630	105.17	490	103.27	227	102.58	213	104.67	735	110.21	2940	106.04	1340	103.56	635	103.88	710	101.50	236	101.08	174
28	102.25	324	103.92	525	105 08	474	103.25	227	102.58	213	106.83	1220	110.00	2860	105.96	1310	103.42	600	103.73	675	101.50	236	101.08	174
29	102.25	324	103.58	469	104.79	426	103.25	227	.....	....	107.04	1280	109.67	2730	105.88	1290	103.38	590	103.60	640	101.50	236	101.21	191
30	102.17	313	103.58	469	104.67	410	103.25	227	.....	....	106.21	1070	109.92	2830	105.79	1250	103.44	605	103.56	635	101.50	236	101.29	203
31	102.17	313	.....	....	104.67	410	103.25	257	.....	....	106.08	1030	.....	....	105.58	1180	.....	.....	103.50	620	101.50	236	.....	.....

Monthly Discharge of Madawaska River at Madawaska for 1916-7

Drainage Area, 800 Square Miles

Month.	Discharge in Second-feet			Discharge in Second-feet per square mile			Run-off
	Maximum	Minimum	Mean	Maximum	Minimum	Mean	Depth in Inches on Drainage Area
October (1916)	392	164	242	.49	.20	.30	.35
November "	650	269	389	.81	.34	.49	.55
December "	670	410	530	.84	.51	.66	.76
January .. (1917)	394	199	262	.49	.25	.33	.38
February	287	206	247	.36	.26	.31	.32
March	1,280	213	395	1.60	.27	.49	.56
April	2,980	1.350	2,176	3.72	1.69	2.72	3.03
May	2,500	845	1,503	3.12	1.06	1.88	2.17
June	1,170	590	894	1.46	.74	1.12	1.25
July	840	580	686	1.05	.72	.88	1.01
August	625	236	357	.78	.29	.44	.51
September	236	174	201	.29	.22	.25	.28
The year	2,980	164	658	3.72	.20	.82	11.16

Maganetawan River (North Branch) near Burk's Falls

Location—One mile north of Burk's Falls station, 200 feet upstream from the Grand Trunk Railway bridge, on lot 7, concession 10, Township of Armour, District of Parry Sound.

Records Available—Monthly discharge measurements from June, 1915. Daily gauge readings from August 1, 1915.

Drainage Area—107 square miles.

Gauge—Vertical steel staff with enamelled face fastened to a 2 x 4 scantling and connected to a wooden platform on the right shore about 250 feet above G.T.R. bridge. Zero of the gauge (elev. 27.23 feet) is referred to a bench mark (elev. 35.00 feet) painted on top of 5-ft. iron pipe 20 feet above gauging station.

Channel and Control—Straight for about 200 feet above and 100 feet below the gauging station to the falls. The banks are high and wooded, and are not liable to overflow. The bed of the stream is composed of clay and a few rocks, practically permanent. The velocity is moderate.

Discharge Measurements—Made by wading with a small Price current meter, in high water just above gauge, in low water 150 feet below gauge.

Winter Flow—Open water conditions.

Accuracy—The rating curve is fairly well defined for lower gauge readings.

Observer—Henry Stroud, Burk's Falls.

Discharge Measurements of Maganetawan River (North Branch) near Burk's Falls in 1916-7

Date	Hydrographer	Width in Feet	Area of Section in Sq. Feet	Mean Velocity in Feet per Sec.	Gauge Height in Feet	Discharge in Sec-Feet	Discharge in Second-feet per Square Mile
1916							
Oct. 11	Murray, W. S. ..	38	72	1.09	29.42	78	.....
1917							
Jan. 16	"	91	350	.25	29.63	88 (a)	.....
Feb. 14	"	40	69	1.22	29.71	83 (a)	.....
Mar. 20	"	63	87	.78	29.30	68 (b)	.....
Apl. 11	"	93	609	1.19	31.75	723	.....
May 9	"	94	548	.76	31.20	416	.....
June 21	Campbell, L. L..	86	474	.42	30.26	200	.....
July 23	Ronald, F	100	508	.74	31.01	308	.....
Aug. 26	"	36	68	1.52	29.44	103	.....
Sept. 24	"	35	48	.85	29.23	42	.....
Oct. 30	"	54	84	1.97	30.23	166	.....

(a) Ice measurement taken 150 feet above regular section.
(b) Ice measurement taken 20 feet above regular section.

Daily Gauge Height and Discharge of Maganetawan River (North Branch) near Burk's Falls for 1916-7

Drainage Area, 107 Square Miles

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge
	Feet	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*
1	29.46	82	31.21	404	30.75	294	29.96	140	29.67	93	29.46	66	31.50	482	32.25	725	30.59	261	30.21	185	30.40	221	29.60	83
2	29.42	77	31.09	374	30.75	294	29.92	133	29.67	93	29.46	66	31.67	530	32.17	695	30.55	252	30.17	178	30.23	188	29.60	83
3	29.42	77	31.00	352	30.84	314	29.88	127	29.71	99	29.42	62	31.84	585	32.09	670	30.51	244	30.17	178	30.15	174	29.56	78
4	29.42	77	30.92	333	31.09	374	29.84	120	29.67	93	29.42	62	31.92	610	32.00	640	30.47	236	30.09	163	30.06	158	29.23	45
5	29.38	72	30.84	314	31.34	437	29.80	113	29.62	86	29.42	62	32.09	670	31.92	610	30.42	225	30.09	163	29.98	144	29.06	35
6	29.25	57	30.75	294	31.46	470	29.80	113	29.71	99	29.44	64	32.30	745	31.75	555	30.42	225	30.17	178	29.90	130	28.90	28
7	29.17	51	30.71	286	31.59	510	29.71	99	29.71	99	29.46	66	32.38	775	31.59	510	30.42	225	30.67	278	29.81	115	28.65	23
8	29.17	51	30.67	278	31.71	545	29.71	99	29.73	102	29.46	66	32.15	690	31.34	437	30.47	236	30.76	297	29.73	102	28.48	20
9	29.21	54	30.67	278	31.80	575	29.75	105	29.71	99	29.46	66	32.09	670	31.25	414	30.47	236	30.84	314	29.69	96	28.40	18
10	29.34	67	30.67	278	31.84	585	29.75	105	29.67	93	29.46	66	32.00	640	31.21	404	30.42	225	30.92	333	29.65	90	28.40	18
11	29.44	79	30.67	278	31.84	585	29.71	99	29.67	93	29.46	66	31.84	585	31.09	374	30.38	217	31.01	354	29.65	90	28.48	20
12	29.44	79	30.67	278	31.84	585	29.67	93	29.71	99	29.44	64	31.67	530	31.00	352	30.34	209	31.92	610	29.56	78	28.48	20
13	29.44	79	30.67	278	31.88	600	29.63	87	29.75	105	29.44	64	31.59	510	30.92	333	30.38	217	32.01	640	29.52	73	28.48	20
14	29.44	79	30.67	278	31.92	610	29.63	87	29.75	105	29.42	62	31.42	459	30.80	305	30.42	225	32.01	640	29.48	68	28.48	20
15	29.46	82	30.67	278	31.96	625	29.67	93	29.75	105	29.38	58	31.34	437	30.67	278	30.42	225	32.09	670	29.54	75	28.52	20
16	29.50	87	30.67	278	32.00	640	29.67	93	29.71	99	29.34	54	31.25	414	30.63	269	30.38	217	31.92	610	29.40	60	29.40	60
17	29.50	87	30.67	278	32.00	640	29.67	93	29.67	93	29.30	50	31.25	414	30.50	242	30.34	209	31.76	560	29.40	60	29.40	60
18	29.59	100	30.67	278	31.92	610	29.65	90	29.67	93	29.30	50	31.34	437	30.42	225	30.34	209	31.67	530	28.40	18	29.40	60
19	29.75	124	30.67	278	31.00	352	29.67	93	29.67	93	29.34	54	31.42	459	30.38	217	30.30	201	31.59	510	28.23	15	29.40	60
20	29.92	158	30.67	278	30.84	314	29.67	93	29.63	87	29.34	54	31.59	510	30.38	217	30.30	201	31.42	459	28.23	15	29.36	56
21	30.67	370	30.63	269	30.75	294	29.67	93	29.59	82	29.38	58	32.75	920	30.38	217	30.26	194	31.26	417	28.23	15	29.36	56
22	30.75	392	30.63	269	30.71	286	29.71	99	29.59	82	29.38	58	33.92	1390	30.38	217	30.26	194	31.17	394	28.15	13	29.36	56
23	30.80	407	30.59	261	30.67	278	29.71	99	29.55	76	29.42	62	34.00	1420	30.42	225	30.17	178	31.09	374	28.06	11	29.15	40
24	31.09	492	30.50	242	30.59	261	29.67	93	29.55	76	29.42	62	34.17	1490	30.50	242	30.17	178	30.97	345	27.73	5	29.15	40
25	31.09	492	30.42	225	30.50	242	29.67	93	29.55	76	29.42	62	33.84	1360	30.59	261	30.09	163	30.84	314	29.23	45	29.15	40
26	31.17	515	30.34	209	30.34	209	29.67	93	29.51	71	29.46	66	33.42	1190	30.67	278	30.21	185	30.76	297	29.44	64	29.15	40
27	31.21	530	30.42	225	30.25	192	29.67	93	29.50	70	30.92	333	33.00	1020	30.75	294	30.17	178	30.67	278	29.48	68	29.15	40
28	31.25	540	30.50	242	30.21	185	29.67	93	29.46	66	30.34	209	32.75	920	30.75	294	30.09	163	30.59	261	29.52	73	29.15	40
29	31.25	540	30.59	261	30.17	178	29.67	93	.....	.....	30.55	252	32.50	820	30.75	294	30.17	178	30.51	244	29.56	78	29.19	42
30	31.25	540	30.75	294	30.09	163	29.67	93	.....	.....	30.75	294	32.34	760	30.75	278	30.26	194	30.42	225	29.56	78	29.10	37
31	31.25	540	.....	.....	30.00	147	29.67	93	.....	.....	31.50	482	.....	.....	30.69	282	.....	.....	30.34	209	29.60	83	.....	.....

Monthly Discharge of Maganetawan River (North Branch) near Burk's Falls for 1916-7

Drainage Area, 107 Square Miles

Month	Discharge in Second-feet			Discharge in Second-feet per Square Mile			Run-off
	Maximum	Minimum	Mean	Maximum	Minimum	Mean	Depth in Inches on Drainage Area
October...(1916)	540	51	225	5.05	.48	2.10	2.42
November "	404	209	282	3.78	1.95	2.64	2.95
December "	640	147	400	5.98	1.37	3.74	4.31
January ..(1917)	140	87	100	1.31	.81	.93	1.07
February	105	66	90	.98	.62	.84	.87
March	482	50	102	4.50	.47	.95	1.10
April.....	1,490	414	748	13.92	3.87	6.99	7.80
May.....	725	217	366	6.78	2.03	3.42	3.94
June	261	163	210	2.44	1.52	1.96	2.19
July.....	670	163	362	6.26	1.52	3.38	3.90
August	221	5	81	2.07	.05	.76	.88
September	83	18	42	.78	.17	.39	.44
The year	1,490	5	251	13.92	.05	2.35	31.84

Maganetawan River (South Branch) near Burk's Falls

Location—One-half mile south of Burk's Falls station, and 200 feet east of G.T. Ry. tracks on lot 8, concession 8, Township of Armour, Parry Sound District.

Records Available—Discharge measurements from June, 1915. Daily gauge heights from August 1, 1915.

Drainage Area—257 square miles.

Gauge—Vertical steel staff with enamelled face, graduated in feet and inches, fastened to 2 x 8 scantling wedged between two hardwood trees on the left shore 20 feet above gauging station. Zero of the gauge (elev. 22.00 feet) is referred to a bench mark (elev. 35.00 feet) painted on top of a 5-ft. iron pipe located near the gauge on the north branch of the river.

Channel and Control—Straight for about 250 feet above and 500 feet below the rapids. The banks are high and wooded, and are not liable to overflow. The current is moderate.

Discharge Measurements—Made by wading with a small Price meter and from G.T.R. bridge below gauge.

Winter Flow—Open water conditions.

Regulation—Temporary dams above, which are used during log driving season, cause fluctuations at the gauge.

Accuracy—Rating curve only fairly well defined.

Observer—Henry Stroud, Burk's Falls.

Discharge Measurements of Maganetawan River (South Branch) near Burk's Falls in 1916-7

Date	Hydrographer	Width in Feet	Area of Section in Sq. Feet	Mean Velocity in Feet per Sec.	Gauge Height in Feet	Discharge in Sec-Feet	Discharge in Second-feet per Square Mile
1916							
Oct. 11....	Murray, W.S ...	64	88	1.71	23.49	151	.....
1917							
Feb. 14....	"	65	155	1.77	24.00	275(a)	.....
April 11....	"	79	541	1.80	25.91	979(b)	.....
May 9....	"	85	571	1.95	26.08	1,116(b)	.....
June 21....	Campbell, L. L..	84	518	1.23	25.17	637(b)	.....
July 23....	Ronald, F	85	400	1.06	24.17	425(b)	.....
Aug. 26....	"	77	495	.52	24.12	259	.....
Sept. 24	"	68	82	1.67	23.58	137	.....

(a) Ice measurement taken 100 feet above regular section.
(b) Measurement taken half mile below regular section.

Daily Gauge Height and Discharge of Maganetawan River (South Branch) near Burk's Falls for 1916-7

Drainage Area, 257 Square Miles

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge
	Feet	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*
1	23.66	229	25.12	630	24.83	515	24.71	473	24.00	248	23.87	213	24.75	487	26.66	1460	24.62	441	24.75	487	24.83	515	24.13	285
2	23.62	216	25.16	645	24.91	545	24.71	473	24.08	270	23.87	213	24.91	545	26.66	1460	24.62	441	24.75	487	24.75	487	24.08	270
3	23.60	209	25.16	645	25.00	580	24.62	441	24.25	320	23.83	203	25.08	615	26.62	1440	24.58	427	24.75	487	24.67	458	24.04	259
4	23.58	202	25.12	630	25.12	630	24.58	427	24.25	320	23.83	203	25.25	680	26.50	1360	24.58	427	24.71	473	24.58	427	24.00	248
5	23.58	202	25.08	615	25.21	665	24.58	427	24.25	320	23.83	203	25.41	750	26.41	1300	24.58	427	24.67	458	24.50	400	24.04	259
6	23.58	202	25.08	615	25.25	680	24.58	427	24.21	308	23.87	213	25.58	825	26.25	1200	24.58	427	24.67	458	24.42	374	24.08	270
7	23.54	189	25.08	615	25.33	715	24.54	414	24.16	293	23.91	223	25.75	910	26.00	1040	24.58	427	24.83	515	24.33	345	24.17	296
8	23.54	189	25.04	600	25.50	790	24.58	427	24.12	282	23.91	223	25.83	950	26.00	1040	24.67	458	24.92	550	24.33	345	24.17	296
9	23.50	176	25.04	600	25.62	845	24.62	441	24.08	270	23.96	237	25.91	995	26.00	1040	24.67	458	25.00	580	24.33	345	24.12	282
10	23.50	176	25.04	600	25.62	845	24.62	441	24.00	248	23.96	237	25.91	995	25.91	995	24.62	441	25.08	615	24.33	345	24.08	270
11	23.48	171	25.00	580	25.62	845	24.62	441	24.00	248	23.96	237	25.91	995	25.83	950	24.58	427	25.17	650	24.33	345	24.00	248
12	23.50	176	25.91	995	25.66	865	24.58	427	24.00	248	23.96	237	26.00	1040	25.79	930	24.58	427	25.25	680	24.33	345	23.92	226
13	23.50	176	25.91	995	25.71	890	24.62	441	24.00	248	24.00	248	25.96	1020	25.75	910	24.62	441	25.21	665	24.33	345	23.87	213
14	23.50	176	25.91	995	25.75	910	24.41	370	24.08	270	24.04	259	25.91	995	25.66	865	24.67	458	25.17	650	24.29	332	23.83	203
15	23.50	176	25.91	995	25.83	950	24.33	345	24.33	345	24.04	259	25.91	995	25.58	825	24.67	458	25.25	680	24.25	320	23.83	203
16	23.54	189	25.91	995	25.91	995	24.25	320	24.33	345	24.00	248	25.83	950	25.54	810	24.62	441	25.17	650	24.25	320	23.83	203
17	23.58	202	25.91	995	25.91	995	24.25	320	24.25	320	24.00	248	25.91	995	25.54	810	24.58	427	25.08	615	24.29	332	23.75	182
18	23.62	216	25.91	995	25.83	950	24.23	314	24.25	320	24.00	248	25.96	1020	25.50	790	25.00	580	25.17	650	24.29	332	23.71	172
19	23.75	260	25.50	790	25.75	910	24.16	293	24.25	320	24.00	248	25.96	1020	25.46	770	25.17	650	25.25	680	24.25	320	23.71	172
20	23.83	287	25.25	680	25.41	750	24.12	282	24.16	293	24.04	259	26.00	1040	25.41	750	25.17	650	25.25	680	24.17	296	23.63	154
21	24.00	345	25.00	580	25.37	735	24.12	282	24.08	270	24.04	259	26.33	1250	25.41	750	25.12	630	25.17	650	24.13	285	23.63	154
22	24.00	345	24.91	545	25.37	735	24.12	282	24.04	259	24.04	259	26.75	1520	25.37	735	25.08	615	25.17	650	24.13	285	23.63	154
23	24.08	371	24.83	515	25.33	715	24.12	282	24.04	259	24.08	270	26.96	1650	25.33	715	25.04	600	25.17	650	24.13	285	23.58	143
24	24.16	399	24.75	487	25.25	680	24.12	282	24.00	248	24.08	270	27.08	1730	25.29	700	25.00	580	25.17	650	24.13	285	23.54	134
25	24.33	457	24.66	455	25.16	645	24.12	282	24.00	248	24.08	270	27.16	1780	25.25	680	25.00	580	25.17	650	24.13	285	23.50	125
26	24.41	483	24.58	427	25.08	615	24.12	282	24.00	248	24.12	282	27.25	1840	25.21	665	24.92	550	25.17	650	24.13	285	23.50	125
27	24.66	555	24 62	441	25.00	580	24.12	282	23.91	223	24.16	293	27.33	1890	25.21	665	24.83	515	25.13	635	24.13	285	23.50	125
28	24.83	625	24.66	455	24.91	545	24.04	259	23.87	213	24.33	345	27.00	1680	25.16	645	24.75	487	25.08	615	24.13	285	23.54	134
29	24.91	650	24.66	455	24.83	515	24.08	270	.....	....	24.50	400	26.83	1570	25.16	645	24.67	458	25.04	600	24.13	285	23.54	134
30	25.08	710	24.75	487	24.75	487	24.04	259	.....	....	24.66	455	26.75	1520	25.00	580	24.67	458	24.92	550	24.13	285	23.58	143
31	25.12	725	.....	....	24.71	473	24.00	248	.....	....	24.75	487	.....	....	24.83	515	.....	....	24.83	515	24.13	285	.....	....

Monthly Discharge of Maganetawan River (South Branch) near Burk's Falls for 1916-7

Drainage Area, 257 Square Miles

Month	Discharge in Second-feet			Discharge in Second-feet per Square Mile			Run-off
	Maximum	Minimum	Mean	Maximum	Minimum	Mean	Depth in Inches on Drainage Area
October (1916)	725	171	312	2.52	.67	1.21	1.39
November "	995	427	669	3.87	1.66	2.60	2.90
December "	995	473	729	3.87	1.84	2.83	3.26
January (1917)	473	248	353	1.84	.96	1.37	1.58
February	345	213	279	1.34	.83	1.09	1.14
March	487	203	266	1.89	.79	1.04	1.20
April	1,890	487	1,142	7.35	1.89	4.44	4.95
May	1,460	515	905	5.68	2.00	3.52	4.06
June	650	427	494	2.53	1.66	1.92	2.14
July	680	458	598	2.65	1.78	2.33	2.69
August	515	285	337	2.00	1.11	1.31	1.51
September	285	125	203	1.11	.49	.79	.88
The year	1,890	125	526	7.35	.49	2.05	27.78

Mississippi River at Ferguson's Falls

Location—At the highway on the road through the Village of Ferguson's Falls, near lots 16 and 17, concession 12, Township of Drummond, County of Lanark.

Records Available—Discharge measurements from July, 1915, and gauge readings from July 13, 1915.

Drainage Area—1.042 square miles.

Gauge—0 to 6 feet of standard gauge plates secured to the inner face of the first pier from the south end of the bridge and near the downstream corner of the pier.

Channel and Control—Channel is straight for 300 feet above and ½ mile below the gauging station. The banks are not liable to overflow. There are 7 channels, formed by the piers of the bridge. The present control is a short distance below the section, and ice action there will affect the discharge relation at low winter stages, but this will not be the point of control for high-water stages. At certain stages measurements are made 1,500 feet below bridge.

Winter Flow—Discharge relation will be affected by ice.

Regulation—The river is regulated throughout its length by power and storage dams, as well as dams in connection with the timber industry.

Accuracy—Open flow relation will be good.

Observer—A. M. Sheppard, Ferguson's Falls.

Discharge Measurements of Mississippi River at Ferguson's Falls in 1916-7

Date	Hydrographer	Width in Feet	Area of Section in Sq. Feet	Mean Velocity in Feet per Sec.	Gauge Height in Feet	Discharge in Sec-Feet	Discharge in Second-feet per Square Mile
1916							
Dec. 18....	Campbell, L. L..	171	199	1.19	101.06	274 (a)	.....
1917							
Feb. 28....	" ..	218	371	1.34	101.62	498 (b)	.....
Apr. 10....	" ..	211	748	6.14	103.83	4,593	.....
May 22....	" ..	199	407	3.55	102.17	1,446	.....
June 15....	" ..	194	362	3.13	101.97	1,131	.....
July 18....	Ronald, F.....	177	245	2.26	101.42	554	.....
Aug. 11....	"	177	248	1.80	101.31	459	.....
Oct. 3....	"	233	227	1.32	101.13	301 (c)	.....

(a) Section partly ice-covered.
(b) Some ice effect.
(c) Reading taken at low-water section.

Daily Gauge Height and Discharge of Mississippi River at Ferguson's Falls for 1916-7

Drainage Area, 1,042 Square Miles

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge
	Feet	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*
1	101.13	328	101.17	352	100.98	242	100.88	138	101.59	440	101.62	478	104.04	4870	103.50	3860	102.08	1260	101.54	640	101.46	565	101.17	352
2	101.10	310	101.15	340	100.98	242	100.88	135	101.60	466	101.60	462	104.19	5150	103.47	3800	102.01	1160	101.50	600	101.46	565	101.17	352
3	101.08	298	101.12	332	100.98	242	100.89	129	101.61	470	101.59	426	104.21	5190	103.40	3670	102.01	1160	101.46	565	101.44	550	101.17	352
4	101.08	298	101.11	316	100.96	234	100.90	129	101.63	500	101.58	426	104.21	5190	103.33	3540	101.97	1110	101.44	550	101.44	550	101.17	352
5	101.08	298	101.08	298	100.98	242	100.90	132	101.63	575	101.57	426	104.21	5190	103.30	3480	101.95	1090	101.42	530	101.42	530	101.17	352
6	101.08	298	101.08	298	101.00	250	100.90	135	101.66	600	101.59	447	104.19	5150	103.23	3350	101.92	1050	101.42	530	101.40	515	101.17	352
7	101.08	298	101.08	298	101.02	262	100.92	135	101.67	620	101.61	505	104.07	4920	103.15	3200	101.89	1020	101.42	530	101.39	510	101.15	340
8	101.06	286	101.08	298	101.08	298	100.90	126	101.69	620	101.60	515	104.08	4940	103.07	3050	101.84	960	101.37	492	101.37	492	101.14	334
9	101.07	292	101.10	310	101.08	298	100.90	117	101.71	550	101.60	515	103.96	4720	103.02	2960	101.83	945	101.35	480	101.35	478	101.15	340
10	101.11	316	101.08	298	101.08	298	100.92	108	101.68	525	101.59	500	103.81	4440	102.94	2810	101.81	920	101.34	470	101.33	462	101.13	328
11	101.13	328	101.07	292	101.02	262	100.93	111	101.67	515	101.56	492	103.73	4290	102.86	2650	101.88	1010	101.36	485	101.33	462	101.13	328
12	101.18	358	101.06	286	100.98	242	100.92	108	101.67	515	101.57	412	103.63	4100	102.77	2490	101.92	1050	101.42	535	101.31	448	101.13	328
13	101.20	370	101.04	274	101.00	250	100.94	108	101.74	515	101.61	440	103.48	3820	102.72	2400	101.93	1070	101.39	510	101.29	433	101.13	328
14	101.21	377	101.03	268	100.98	242	101.00	123	101.75	515	101.58	433	103.41	3690	102.65	2270	101.93	1070	101.40	515	101.28	426	101.10	310
15	101.21	377	101.02	262	100.98	242	101.00	126	101.77	515	101.57	419	103.33	3540	102.56	2090	101.91	1040	101.42	535	101.26	412	101.08	298
16	101.23	391	101.02	262	100.98	242	101.00	129	101.77	500	101.53	433	103.28	3440	102.51	2000	101.87	995	101.42	535	101.25	405	101.08	298
17	101.33	462	101.00	250	100.98	242	101.00	132	101.75	500	101.52	440	103.24	3370	102.47	1920	101.84	960	101.42	535	101.23	391	101.08	298
18	101.28	426	101.00	250	100.98	242	101.04	141	101.73	490	101.52	440	103.21	3310	102.41	1810	101.82	935	101.43	540	101.23	391	101.08	298
19	101.25	405	101.00	250	101.00	250	101.10	165	101.75	515	101.52	440	103.24	3370	102.35	1700	101.80	910	101.46	565	101.22	384	101.09	304
20	101.30	440	100.98	242	100.98	242	101.15	180	101.74	500	101.52	447	103.32	3520	102.28	1580	101.73	835	101.49	590	101.21	377	101.14	334
21	101.31	448	100.98	242	100.92	218	101.17	196	101.72	485	101.52	470	103.54	3930	102.24	1510	101.67	770	101.50	600	101.19	364	101.14	334
22	101.31	448	100.96	234	100.91	195	101.20	218	101.69	485	101.52	492	103.73	4290	102.22	1470	101.66	760	101.48	585	101.17	352	101.13	328
23	101.31	448	100.98	242	101.05	198	101.25	230	101.70	500	101.53	515	103.80	4420	102.25	1520	101.59	690	101.48	585	101.21	377	101.11	316
24	101.30	440	101.06	286	100.92	180	101.28	250	101.68	505	101.64	600	103.83	4480	102.25	1520	101.54	640	101.48	585	101.23	391	101.10	310
25	101.26	412	101.03	268	100.90	165	101.34	262	101.64	505	101.67	650	103.83	4480	102.25	1520	101.52	620	101.48	585	101.20	370	101.10	310
26	101.30	440	100.98	242	100.90	156	101.42	304	101.64	500	101.88	1010	103.80	4420	102.23	1490	101.50	600	101.48	585	101.21	377	101.10	310
27	101.26	412	100.92	218	100.90	150	101.46	340	101.65	485	102.46	1900	103.73	4290	102.20	1440	101.50	600	101.48	585	101.17	352	101.10	310
28	101.25	405	100.92	218	100.90	150	101.50	358	101.64	485	103.00	2920	103.64	4120	102.18	1410	101.49	590	101.48	585	101.16	346	101.12	322
29	101.22	384	100.93	222	100.88	150	101.53	377	.....	....	103.38	3630	103.61	4060	102.17	1400	101.51	610	101.48	585	101.15	340	101.12	322
30	101.20	370	100.96	234	100.88	144	101.55	398	.....	....	103.75	4320	103.55	3950	102.13	1330	101.55	650	101.48	585	101.15	340	101.12	322
31	101.17	352	.....	....	100.88	141	101.56	405	.....	....	103.96	4720	.....	....	102.10	1290	.....	....	101.48	585	101.17	352	.....	.....

Monthly Discharge of Mississippi River at Ferguson's Falls for 1916-7

Drainage Area, 1,042 Square Miles

Month	Discharge in Second-feet			Discharge in Second-feet per Square Mile			Run-off
	Maximum	Minimum	Mean	Maximum	Minimum	Mean	Depth in Inches on Drainage Area
October (1916)	462	286	371	.44	.27	.36	.42
November "	352	218	273	.34	.21	.26	.29
December "	298	141	223	.29	.14	.21	.24
January...(1917)	405	108	192	.39	.10	.18	.21
February.....	620	440	514	.59	.42	.49	.51
March.....	4,720	412	978	4.53	.40	.94	1.08
April.....	5,190	3,310	4,288	4.98	3.18	4.12	4.59
May.....	3,860	1,290	2,275	3.70	1.24	2.18	2.51
June	1,260	590	903	1.21	.57	.87	.97
July	640	470	554	.61	.45	.53	.61
August.....	565	340	429	.54	.33	.41	.47
September.....	352	298	325	.34	.29	.31	.35
The year	5,190	108	942	4.98	.10	.90	12.27

Mississippi River at Galetta

Location—In the Village of Galetta, Township of Fitzroy, County of Carleton, about one hundred feet above, and parallel to the highway bridge over the river. It is only a few hundred yards below the dam and power house of the Galetta Power & Milling Company.

Records Available—Discharge measurements from June, 1915, and gauge readings twice daily from June 24, 1915.

Drainage Area—1,456 square miles.

Gauge—0 to 9 feet of standard gauge plates secured to the left abutment of the highway bridge. High stages measured by rule from gauge.

Channel and Control—Channel is straight for 200 feet above and below the section to a little rapid. The river bed is composed of gravel and stones, with solid rock on the right bank and gravel on the left bank. The point of control is through a solid rock formation a hundred and fifty yards below the section.

Discharge Measurements—Made by wading and from a boat held up to tag line by cable. Extreme high-water measurements have to be made from the highway bridge.

Winter Flow—The winter conditions here will not seriously affect the gauge height and discharge relations.

Regulation—The river is subject to regulation throughout its entire length. In the upper river are storage dams for power purposes, as well as timber dams for driving purposes.

Accuracy—Owing to the wet season the wasted water has been considerably more than would usually be the case. This season's relations between gauge height and discharge are likely better than those of the ordinary year.

Co-operation—Discharge measurements made at the bridge by the Department of Public Works of Canada.

Observer—J. P. Coyne, Galetta.

Discharge Measurements of Mississippi River at Galetta in 1916-7

Date	Hydrographer	Width in Feet	Area of Section in Sq. Feet	Mean Velocity in Feet per Sec.	Gauge Height in Feet	Discharge in Sec-Feet	Discharge in Second-feet per Square Mile
1916							
Oct. 24....	Campbell, L.L..	75	150	3.47	244.55	519	.....
Nov. 13....	" ..	65	115	2.76	243.92	317	.....
Dec. 5....	" ..	64	125	3.11	244.17	389	.....
1917							
Jan. 23....	" ..	57	110	2.50	243.90	276(a)	.....
Feb. 27....	" ..	67	123	2.74	244.12	337(b)	.....
Mar. 17....	" ..	56	106	2.79	243.88	295(c)	.....
April 13....	" ..	106	1,120	3.77	250.99	4,218(d)	.....
" 16....	" ..	106	1,066	3.46	250.50	3,689(d)	.....
" 30....	" ..	103	1,047	3.39	250.32	3,458(d)	.....
May 10....	" ..	102	933	2.78	249.30	2,592(d)	.....
" 14....	" ..	102	872	2.62	248.74	2,281(d)	.....
" 25....	" ..	102	752	2,27	247.70	1,707(e)	.....
June 2....	Hatton	102	715	1,96	247.15	1,403(e)	.....
" 2....	"	102	715	2.11	247.15	1,599(e)	.....
" 9....	"	99	677	1.47	246.32	997(e)	.....
" 9....	"	99	677	1.80	246.32	1,218(e)	.....
Aug. 10....	Ronald, F.....	81	150	3.40	244.49	515	.....

(a) Ice may affect.
(b) Ice at gauge and along edges of section.
(c) Ice at gauge and at left bank.
(d) Reading taken from highway bridge. Surface velocities recorded and coefficient applied
(e) Reading taken from highway bridge.

Daily Gauge Height and Discharge of Mississippi River at Galetta for 1916-7

Drainage Area, 1,456 Square Miles

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge
	Feet	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*
1	243.99	330	244.03	345	244.15	391	243.78	250	244.03	345	244.11	376	251.99	5570	250.36	3470	247.34	1610	244.94	690	244.57	550	243.82	266
2	243.92	304	243.99	330	244.09	368	243.82	266	244.03	345	244.11	376	252.15	5780	250.36	3470	247.03	1480	244.98	705	244.65	580	243.78	250
3	244.03	345	244.03	345	243.94	311	243.86	280	243.86	280	244.03	345	252.40	6120	250.20	3320	246.20	1170	244.99	710	244.57	550	243.86	281
4	243.90	296	243.97	323	244.09	368	243.88	288	243.86	280	243.94	311	252.32	6010	250.03	3170	246.07	1110	244.90	675	244.30	448	243.95	315
5	243.90	296	243.86	281	244.11	376	243.94	311	243.99	330	244.03	345	252.28	5950	249.90	3070	246.15	1150	244.82	645	244.28	440	244.03	345
6	243.95	315	243.97	323	244.15	391	243.86	280	243.99	330	243.94	311	252.15	5780	249.74	2940	246.11	1130	244.82	645	244.24	425	244.09	368
7	243.90	296	243.99	330	244.28	440	243.74	235	243.95	315	243.94	311	252.53	6290	249.65	2870	246.15	1150	244.24	425	244.28	440	244.09	368
8	243.74	235	243.97	323	244.26	433	243.88	288	244.03	345	244.03	345	252.03	5620	249.61	2850	246.30	1210	244.20	410	244.30	448	244.04	349
9	243.78	250	243.92	304	244.24	425	243.82	286	244.03	345	244.08	364	251.82	5340	249.40	2700	246.28	1200	244.40	486	244.38	478	243.90	296
10	243.82	265	244.03	345	244.03	345	243.95	315	244.07	360	244.05	353	251.53	4950	249.28	2620	246.19	1170	244.57	550	244.38	478	243.86	281
11	243.94	311	244.03	345	244.01	338	244.03	345	243.95	315	244.03	345	251.40	4770	249.15	2530	246.40	1250	244.67	590	244.45	505	243.86	281
12	243.94	311	243.92	304	244.15	391	244.15	391	244.03	345	243.94	311	251.28	4610	249.11	2510	246.57	1300	244 76	625	244.28	440	243.84	273
13	244.03	345	243.94	311	244.11	376	244.07	360	243.99	330	243.88	288	251.03	4270	248.94	2400	246.53	1290	244.78	630	244.28	440	243.86	281
14	244.03	345	243.94	311	244.03	345	243.95	315	244.07	360	243.92	304	250.82	3980	248.78	2310	246.51	1280	244.78	630	244.15	391	243.88	288
15	243.99	330	243.90	296	244.01	338	243.90	296	243.99	330	243.97	322	250.70	3820	248.61	2210	246.54	1290	244.82	645	244.20	410	243.99	330
16	244.13	383	243.94	311	244.01	338	243.95	315	244.15	391	244.01	338	250.53	3640	248.57	2180	246.36	1230	244.74	615	244.24	425	243.90	296
17	244.19	406	243.94	311	243.86	280	244.03	345	244.11	376	243.94	311	250.40	3510	248.34	2060	246.28	1200	244.86	660	244.20	410	243.86	281
18	244.28	440	243.99	330	243.92	304	244.05	353	243.98	326	243.90	296	250.24	3360	248.30	2040	246.30	1210	244.90	675	244.17	399	243.78	250
19	244.40	486	243.94	311	244.03	345	244.03	345	244.03	345	243.99	330	250.15	3280	248.20	1990	246.28	1200	245.03	725	244.15	391	243.88	288
20	244.53	535	244.01	338	243.94	311	244.03	345	244.07	360	243.78	250	250.20	3320	247.94	1860	246.20	1170	245.07	740	244.20	410	243.88	288
21	244.70	600	244.01	338	244.03	345	243.86	280	244.07	360	243.94	311	250.61	3720	247.74	1770	246.09	1120	245.45	885	244.17	399	243.99	330
22	244.74	615	243.99	330	244.03	345	244.03	345	244.15	391	243.94	311	250.61	3720	247.74	1770	245.90	1060	245.24	805	244.11	376	243.97	323
23	244.49	520	244.01	338	244.03	345	243.95	315	244.20	410	244.17	391	250.57	3680	247.84	1810	245.78	1010	245.15	770	244.05	353	243.92	304
24	244.49	520	244.03	345	243.82	266	243.99	330	244.17	398	245.63	950	250.45	3560	247.84	1810	245.57	930	244.98	705	244.20	410	243.86	281
25	244.53	535	243.97	323	243.78	250	243.97	323	243.99	330	245.74	995	250.53	3640	247.72	1760	245.36	850	244.90	675	244.40	486	243.90	296
26	244.61	565	243.99	330	243.94	311	244.05	353	244.07	360	248.40	2090	250.57	3680	247.59	1710	245.36	850	244.86	660	244.32	456	243.86	281
27	244.65	580	243.92	304	243.92	304	244.03	345	244.07	360	251.70	5180	250.53	3640	247.44	1650	245.34	845	244.74	615	244.21	414	243.95	315
28	244.42	494	244.01	338	243.99	330	243.95	315	244.07	360	252.57	6350	250.49	3600	247.36	1610	245.13	760	244.73	610	244.15	391	243.95	315
29	244.18	402	243.99	330	243.92	304	244.03	345	.....	.....	250.94	4150	250.40	3510	247.32	1600	245.15	770	244.56	545	244.11	376	243.95	315
30	244.03	345	244.05	353	243.94	311	243.90	296	.....	.....	250.70	3820	250.32	3430	247.32	1600	245.20	790	244.45	505	243.90	296	243.88	288
31	243.99	330	.....	.....	243.78	250	243.90	296	.....	.....	250.90	4090	.....	....	247.32	1600	.....	....	244.52	530	243.80	258	.....	....

Monthly Discharge of Mississippi River at Galetta for 1916-7

Drainage Area, 1,456 Square Miles

Month	Discharge in Second-feet			Discharge in Second-feet per Square Mile			Run-off
	Maximum	Minimum	Mean	Maximum	Minimum	Mean	Depth in Inches on Drainage Area
October...(1916)	615	235	398	.42	.16	.27	.31
November "	353	281	325	.24	.19	.22	.25
December "	440	250	341	.30	.17	.23	.27
January ..(1917)	391	235	315	.27	.16	.22	.25
February.....	410	280	347	.28	.19	.24	.25
March.....	6,350	250	1,135	4.36	.17	.78	.90
April.....	6,290	3.280	4,405	4.32	2.25	3.03	3.38
May.....	3,470	1,600	2,299	2.38	1.10	1.58	1.82
June.....	1,610	760	1,126	1.11	.52	.77	.86
July.....	885	410	638	.61	.28	.44	.51
August.....	580	258	428	.40	.18	.29	.33
September.....	368	250	301	.25	.17	.21	.23
The year.....	6,350	235	1,004	4.36	.16	.69	9.37

Mississippi River near Snow Road

Location—At the highway bridge about two miles below the Village of Snow Road, Township of Sherbrooke, County of Lanark.

Records Available—Discharge measurements from July, 1915, and gauge readings on week days since July 30, 1915.

Drainage Area—446 square miles.

Gauge—0 to 6 ft. of standard gauge plates secured vertically to the downstream side of the right abutment of the highway bridge. The elevation of the zero on gauge is assumed as 100.00.

Channel and Control—The channel approaches and leaves the section at a slight angle. The banks are high, and are not liable to overflow. The bridge pier forms two channels at the gauging section. Earth, rocks and gravel in the river bed, not shifting. Control for ordinary stages not well defined. At very high water stages the point of control is probably the head of the rapids just above High Falls.

Discharge Measurements—Measurements made from bridge at all stages.

Winter Flow—Discharge relation affected by ice.

Regulation—The power and lumber companies operating on this river have storage dams above this point.

Accuracy—No Sunday readings have been secured by gauge-readers, but the fluctuation in stage is slow. The open-water relation should be good.

Observer—Fred. Jackson, Snow Road.

Discharge Measurements of Mississippi River near Snow Road in 1916-7

Date	Hydrographer	Width in Feet	Area of Section in Sq. Feet	Mean Velocity in Feet per Sec.	Gauge Height in Feet	Discharge in Sec-Feet	Discharge in Second-feet per Square Mile
1916							
Oct. 1....	Campbell, L. L..	58	300	.69	101.92	208	.....
Nov. 17....	" ..	58	283	.47	101.62	134 (a)	.....
Dec. 8....	" ..	58	283	.45	101.58	127 (b)	.....
1917							
Feb. 20....	Hatton	54	229	.73	102.24	166 (b)	.....
Mar. 21....	Campbell, L. L..	54	250	.72	102.16	180 (b)	.....
Apr. 12....	" ..	63	392	2.21	103.50	868	.....
May 9....	" ..	58	444	3.22	104.42	1,430	.....
June 7....	Hatton	58	346	1,55	102,75	537	.....
July 19....	Ronald, F	58	316	.96	102.21	305	.....
Aug. 8....	Hatton, M.R....	58	309	1.03	102.29	323	.....
Oct. 16....	" ..	58	277	.62	101.87	191	.....

(a) Ice above and below section.
(b) Ice measurement.

Daily Gauge Height and Discharge of Mississippi River near Snow Road for 1916-7

Drainage Area, 446 Square Miles

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge
	Feet	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*
1	.....	243	101.88	200	101.50	116	101.00	472	102.17	171	102.08	129	.....	1300	105.21	2010	103.00	620	.....	352	102.58	428	102.13	271
2	101.96	237	101.88	200	101.50	116	101.00	72	102.17	171	102.08	129	104.13	1250	105.17	1980	103.00	620	102.33	336	102.50	398	.....	272
3	101.96	237	101.85	192	.....	116	101.00	72	102.17	171	102.08	129	104.08	1220	105.08	1920	.....	600	102.33	336	102.46	383	102.14	274
4	101.96	237	101.85	186	101.50	116	101.00	72	.....	171	.....	132	104.00	1160	105.00	1860	102.92	580	102.33	336	102.42	368	102.12	267
5	101.92	229	.....	184	101.50	116	101.04	74	102.17	171	102.12	136	103.92	1120	104.88	1780	102.88	560	102.29	322	.....	344	102.10	261
6	101.92	229	101.81	181	101.54	122	101.08	75	102.17	171	102.12	136	103.67	970	.....	1700	102.83	535	102.25	309	102.28	319	102.08	255
7	101.92	229	101.79	176	101.58	129	.....	75	102.17	171	102.12	136	103.50	875	104.67	1630	102.75	500	102.25	309	102.33	336	102.08	255
8	.....	279	101.75	166	101.58	129	101.08	75	102.17	171	102.10	154	.....	850	104.50	1510	102.71	482	.....	302	102.22	299	102.08	255
9	102.33	329	101.75	166	101.58	129	101.17	79	102.19	176	102.08	150	103.42	830	104.42	1450	102.75	500	102.21	296	102.29	322	.....	255
10	102.38	344	101.73	161	.....	121	101.17	79	102.21	181	102.08	150	103.38	810	104.33	1390	.....	540	102.25	309	102.25	309	102.08	255
11	102.42	356	101.71	156	101.58	114	101.25	82	.....	186	.....	160	103.42	830	104.21	1310	102.92	580	102.25	309	102.25	309	102.08	255
12	102.38	344	.....	161	101.50	104	101.33	86	102.25	192	102.17	171	103.58	915	104.13	1250	102.87	555	102.25	309	.....	309	102.08	255
13	102.33	329	101.75	166	101.42	98	101.42	91	102.25	192	102.25	192	103.79	1040	.....	1160	102.83	535	102.23	303	102.25	309	102.08	255
14	102.29	318	101.69	152	101.33	92	.....	90	102.25	192	102.25	192	103.92	1120	103.83	1060	102.75	500	102.21	296	102.25	309	102.08	255
15	.....	308	101.67	147	101.25	88	101.46	88	102.25	192	102.25	192	.....	1170	103.67	970	102.71	482	.....	296	102.21	296	102.08	255
16	102.21	298	101.62	136	101.17	84	101.50	90	102.25	192	102.25	192	104.08	1220	103.58	915	102.67	465	102.21	296	102.21	296	.....	252
17	102.21	298	101.62	136	.....	81	101.54	92	102.23	186	102.25	192	104.21	1310	103.50	875	.....	446	102.21	296	102.21	296	102.06	249
18	102.21	298	101.58	129	101.08	79	101.58	95	.....	186	.....	187	104.42	1450	103.42	830	102.58	428	102.21	296	102.21	296	102.04	244
19	102.21	298	.....	129	101.00	76	101.60	96	102.23	186	102.21	181	104.63	1600	103.33	785	102.52	405	102.21	296	.....	296	102.04	244
20	102.23	302	101.58	129	101.00	76	101.75	110	102.25	166	102.17	171	104.83	1740	.....	785	102.50	398	102.25	309	102.21	296	102.04	244
21	102.25	308	101.58	129	101.00	76	.....	110	102.25	166	102.17	197	105.08	1920	103.33	785	102.46	383	102.25	309	102.17	283	102.04	244
22	.....	298	101.54	122	101.00	76	101.75	110	102.25	166	102.17	197	.....	1920	103.29	760	102.42	368	.....	354	102.17	283	102.04	244
23	102.17	288	101.50	116	101.00	76	101.75	110	102.21	156	102.19	229	105.08	1920	103.25	740	102.33	336	102.50	398	102.19	290	.....	238
24	102.12	275	101.50	116	.....	77	101.75	110	102.17	147	102.21	264	105.25	2040	103.25	740	.....	336	102.58	428	102.19	290	102.00	232
25	102.08	265	101.50	116	101.04	78	101.71	105	.....	147	.....	331	105.21	2010	103.25	740	102.33	336	102.58	428	102.19	290	102.00	232
26	102.00	245	.....	116	101.04	78	102.00	154	102.17	147	102.50	398	105.17	1980	103.21	720	102.33	336	102.67	465	.....	287	102.00	232
27	102.00	245	101.50	116	101.04	74	102.10	178	102.12	136	103,42	830	105.25	2040	.....	710	102.40	361	102.67	465	102.17	283	102.00	232
28	102.00	245	101.48	114	101.04	74	.....	185	102.08	129	104.67	1630	105.29	2060	103.17	700	102.38	354	102.67	465	102.17	283	102.00	232
29	.....	237	101.46	111	101.02	73	102.15	192	.....	...	104.62	1590	.....	2050	103.08	655	102.42	368	.....	455	102.17	283	102.00	232
30	101.92	229	101.50	116	101.02	73	102.17	197	.....	...	104.58	1570	105.25	2040	103.00	620	102.42	368	102.62	444	102.17	283	.....	232
31	101.92	229	.....	...	.....	73	102.17	197	.....	...	104.25	1340	.....	....	102.96	600	.....	...	102.62	444	102.13	271	.....	.....

Monthly Discharge of Mississippi River near Snow Road for 1916-7

Drainage Area, 446 Square Miles

Month	Discharge in Second-feet			Discharge in Second-feet per Square Mile			Run-off
	Maximum	Minimum	Mean	Maximum	Minimum	Mean	Depth in Inches on Drainage Area
October ..(1916)	356	229	278	.80	.51	.62	.71
November "	200	111	148	.45	.25	.33	.37
December "	129	73	95	.29	.16	.21	.24
January ..(1917)	197	72	107	.44	.16	.24	.28
February	192	129	171	.43	.29	.38	.40
March	1,630	129	380	3.65	.29	.85	.98
April	2,060	810	1,425	4.62	1.82	3.20	3.57
May	2,010	600	1,127	4.51	1.35	2.52	2.91
June.....	620	336	463	1.39	.75	1.04	1.16
July	465	296	351	1.04	.66	.79	.91
August	428	271	311	.96	.61	.70	.81
September	274	232	249	.61	.52	.56	.62
The year	2,060	72	426	4.62	.16	.96	12.96

Moira River near Foxboro

Location—Three hundred feet above G.T.R. Crossing, and six hundred feet east of Foxboro Station, on the G.T.R.-Belleville, Peterboro Branch. Near Lot 5, Concession VI, Township of Thurlow, County of Hastings.

Records Available—Monthly discharge measurements from September, 1915, and gauge readings from October 12, 1915.

Drainage Area—1,038 square miles.

Gauge—A boxed chain gauge on the right bank of the river against a tree 400 feet above section. When the gauge reads zero the elevation of the water is 320.46.

Channel and Control—At one side of the river at the section are boulders and rocks, but the rest of the section is smooth, solid rock, liable to no movement at all. The control is only a few feet below the section and is not likely to freeze over in winter except for short periods of time.

Discharge Measurements—At ordinary stages the measurements are made by wading, at tag line.

Winter Flow—The relation of gauge height to discharge will be but slightly affected by ice, but likely in a fairly uniform manner throughout the winter.

Regulation—The river above the section has dams in many places besides the regulation for the lumber interest, on different tributary lakes and streams.

Accuracy—Open water relation will be good.

Observer—C. Stewart, Foxboro P.O.

Discharge Measurements of Moira River near Foxboro in 1916-7

Date	Hydrographer	Width in Feet	Area of Section in Sq. Feet	Mean Velocity in Feet per Sec.	Gauge Height in Feet	Discharge in Sec-Feet	Discharge in Second-feet per Square Mile
1916							
Oct. 12....	Campbell, L. L..	115	107	.67	321.50	72	.....
Nov. 22....	" ..	144	149	.74	321.65	110 (a)	.....
Dec. 22....	" ..	132	199	1.83	322.28	364 (b)	.....
1917							
Feb. 16....	" ..	230	227	1.46	322.11	333 (c)	.....
Mar. 7....	" ..	162	226	1.21	321.97	273 (d)	.....
April 6....	" ..	211	2,946	2.33	327.25	6,868 (e)	.....
" 27....	" ..	210	2,425	1.18	324.69	2,850 (e)	.....
May 17....	" ..	205	2,133	.51	323.31	1,088	.....
June 15 ...	" ..	159	328	2.18	322.91	717	.....
Aug. 16....	Ronald, F	148	148	6.00	321.60	92	.....
Oct. 9....	"	151	156	.67	321.33	104	.....

(a) Ice above section.
(b) Ice at gauge and above section.
(c) Ice measurement.
(d) Ice measurement covered above section.
(e) Reading taken 450 feet above regular section.

Daily Gauge Height and Discharge of Moira River near Foxboro for 1916-7

Drainage Area, 1,038 Square Miles

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge
	Feet	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*
1	321.60	105	321.62	140	321.91	228	322.13	314	322.16	327	322.04	276	328.14	10900	324.35	2330	323.16	940	322.45	468	321.93	236	321.25	70
2	321.60	105	321.66	150	321.91	228	322.15	322	322.16	327	322.06	284	327.74	9880	324.30	2210	323.11	900	322.45	468	321.90	225	321.25	70
3	321.58	98	321.66	150	321.91	228	322.15	322	321.71	163	322.08	292	327.50	9270	324.30	2210	323.27	1030	322.41	446	321.90	225	321.24	69
4	321.56	92	321.64	145	321.95	242	322.15	322	321.74	172	322.08	292	327.36	8910	324.28	2180	323.23	1000	322.34	410	321.96	246	321.24	69
5	321.54	85	321.63	142	322.05	280	322.16	327	321.77	181	322.12	309	327.27	8680	324.19	2060	323.19	965	322.34	410	321.77	181	321.22	67
6	321.52	79	321.61	138	322.13	314	322.25	368	321.81	194	322.10	300	327.23	8580	324.07	1890	323.14	925	322.34	410	321.74	172	321.22	67
7	321.54	85	321.61	138	322.21	350	322.25	368	321.84	204	322.11	304	327.34	8860	323.97	1760	323.12	905	322.33	405	321.71	163	321.22	67
8	321.54	85	321.60	135	322.21	350	322.25	368	321.87	214	322.11	304	327.20	8500	323.89	1670	323.04	845	322.30	390	321.68	155	321.20	65
9	321.55	88	321.63	142	322.35	415	322.26	372	321.91	228	322.11	304	327.03	8070	323.84	1610	323.00	815	322.30	390	321.74	172	321.20	65
10	321.54	85	321.64	145	322.36	420	322.27	376	321.94	239	322.15	322	326.69	7200	323.79	1550	322.98	800	322.30	390	321.74	172	321.21	66
11	321.54	85	321.66	150	322.46	473	322.24	363	321.97	250	322.16	327	326.42	6520	323.69	1440	322.97	790	322.32	400	321.71	163	321.20	65
12	321.54	85	321.69	158	322.46	473	322.16	327	322.01	264	322.20	345	326.22	6010	323.63	1380	322.95	780	322.34	410	321.64	145	321.18	63
13	321.58	98	321.68	155	322.33	405	322.16	327	322.04	276	322.20	345	325.89	5160	323.55	1300	323.07	865	322.34	410	321.65	148	321.16	61
14	321.56	92	321.68	155	322.37	425	322.19	340	322.07	288	322.21	350	325.70	4680	323.47	1220	323.59	1340	322.34	410	321.65	148	321.14	59
15	321.54	85	321.68	155	322.37	425	322.19	340	322.10	300	322.22	354	325.40	4020	323.38	1130	323.13	915	322.32	400	321.62	140	321.13	58
16	321.58	98	321.68	155	322.38	430	322.19	340	322.11	304	322.29	386	325.28	3760	323.32	1080	323.04	845	322.32	400	321.59	132	321.14	59
17	321.54	85	321.69	158	322.33	405	322.16	327	322.18	336	322.32	400	325.15	3530	323.18	960	322.97	790	322.32	400	321.28	73	321.14	59
18	321.55	88	321.68	155	322.33	405	322.19	340	322.13	314	322.47	478	324.93	3160	323.02	830	322.93	760	322.33	405	321.26	71	321.14	59
19	321.62	112	321.68	155	322.27	376	322.18	336	322.11	304	322.55	520	324.79	2930	323.06	860	322.87	720	322.27	376	321.25	70	321.15	60
20	321.74	155	321.68	155	322.25	368	322.17	332	322.08	292	322.62	560	324.73	2840	323.19	965	322.81	675	322.26	376	321.25	70	321.18	63
21	321.74	155	321.68	155	322.25	368	322.16	327	322.06	284	322.66	585	324.67	2750	323.18	960	322.78	660	322.23	358	321.26	71	321.18	63
22	321.74	155	321.68	155	322.25	368	322.16	327	322.07	288	322.84	700	324.92	3140	323.17	950	322.75	640	322.20	345	321.22	67	321.16	61
23	321.72	148	321.69	158	322.18	336	322.15	322	322.06	284	323.28	1040	324.93	3160	323.16	940	322.71	615	322.18	336	321.25	70	321.16	61
24	321.69	137	321.70	160	322.25	368	322.15	322	322.05	280	324.07	1890	324.98	3240	323.26	1030	322.61	555	322.16	327	321.25	70	321.16	61
25	321.69	137	321.68	155	322.23	358	322.15	322	322.03	272	324.44	2410	324.88	3080	323.35	1100	322.54	515	322.13	314	321.25	70	321.16	61
26	321.67	130	321.69	158	322.20	345	322.16	327	322.05	280	325.21	3640	324.78	2920	323.40	1150	322.52	505	322.10	300	321.22	67	321.16	61
27	321.68	133	321.72	166	322.21	350	322.16	327	322.10	300	326.07	5620	324.71	2810	323.39	1140	322.49	489	322.08	292	321.20	65	321.16	61
28	321.68	133	321.73	169	322.25	368	322.16	327	322.04	276	327.53	9350	324.69	2780	323.36	1110	322.44	462	322.06	284	321.25	70	321.16	61
29	321.64	119	321.83	200	322.19	340	322.14	318	.....	....	328.38	11510	324.59	2630	323.30	1060	322.54	515	322.01	264	321.22	67	321.16	61
30	321.64	119	321.87	214	322.16	327	322.20	345	.....	....	328.75	12460	324.46	2440	323.23	1000	322.47	478	321.94	239	321.22	67	321.18	63
31	321.59	102	.....	....	322.12	309	322.16	327	.....	....	328.56	11970	.....	.....	323.18	960	.....	....	321.93	236	321.22	67	.....	....

Monthly Discharge of Moira River near Foxboro for 1916-7.

Drainage Area, 1,038 Square Miles

Month	Discharge in Second-feet			Discharge in Second-feet per Square Mile			Run-off
	Maximum	Minimum	Mean	Maximum	Minimum	Mean	Depth in Inches on Drainage Area
October (1916)	155	79	108	.15	.08	.10	.12
November "	214	135	156	.21	.13	.15	.17
December "	473	228	357	.46	.22	.34	.39
January (1917)	376	314	336	.36	.30	.32	.37
February	336	163	266	.32	.16	.26	.27
March.....	12,460	276	2,201	12.00	.27	2.12	2.44
April.....	19,900	2,440	5,347	10.50	.235	5.15	5.74
May.....	2,330	830	1,356	2.24	.80	1.31	1.51
June.....	1,340	462	768	1.29	.45	.74	.83
July.....	468	236	370	.45	.23	.36	.42
August.....	246	65	124	.24	.06	.12	.14
September	70	58	63	.07	.06	.06	.07
The year	12,460	58	953	12.00	.06	.92	12.46

Muskoka River (North Branch) near Port Sydney

Location—At the highway bridge near the Village of Port Sydney and ¼ mile below Mary Lake, on lot 25, concession 5, Township of Stephenson, Muskoka District.

Records Available—Discharge measurements from April, 1915. Daily gauge heights from April 16, 1915.

Drainage Area—560 square miles.

Gauge—Vertical steel staff with enamelled face graduated in feet and inches and fastened to abutment on left upstream side of bridge. Zero of gauge (elev. 7.00 feet) is referred to a bench mark (elev. 24.78 feet) painted on top of right abutment, downstream side.

Channel—Straight for about 1,500 feet above and 500 feet below gauging station. Both banks are high, wooded, and not liable to overflow. The bed of the channel is composed of clay and gravel.

Discharge Measurements—Made from highway bridge with a small Price current meter.

Winter Flow—Open water conditions throughout the year.

Regulation—The operation of dam at Mary Lake during certain periods of the year will cause fluctuation at the gauge.

Accuracy—The rating curve is well defined, and estimates of discharge are good.

Observer—A. E. McInnes, Port Sydney.

Discharge Measurements of Muskoka River (North Branch) near Port Sydney in 1916-7

Date	Hydrographer	Width in Feet	Area of Section in Sq. Feet	Mean Velocity in Feet per Sec.	Gauge Height in Feet	Discharge in Sec-Feet	Discharge in Second-feet per Square Mile
1916							
Nov. 30....	Murray, W. S..	55	357	3.60	9.66	1,285	.....
1917	" ..						
Feb. 13....		46	258	.75	7.87	194 (a)	.....
Mar. 22....	" ..	46	265	1.01	8.08	268	.....
Apr. 12....	" ..	57	472	6.33	11.66	2,980	.....
May 9....	" ..	48	280	1.23	8.27	344	.....
June 21.,..	Campbell, L. L..	54	384	2.95	9.33	1,131	.....
July 27....	Ronald, F.....	56	349	3.66	9.55	1,282 (b)	.....
Aug. 25....	"	49	277	1.26	8.25	350	.....
Sept. 25....	"	42	257	.40	7.71	104	.....

(a) Thin ice on control and at section.
(b) Dam above opened during metering.

Daily Gauge Height and Discharge of Muskoka River (North Branch) near Port Sydney for 1916-7

Drainage Area, 560 Square Miles

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge
	Feet	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*
1	7.83	125	9.75	1390	10.49	1950	8.91	775	8.33	398	8.08	249	10.41	1890	12.16	3520	10.08	1630	9.00	840	8.42	452	8.08	249
2	7.83	125	9.71	1360	10.41	1890	8.66	605	8.33	398	8.08	249	10.75	2160	12.00	3340	9.96	1540	9.00	840	8.30	380	8.08	249
3	7.83	125	9.50	1200	10.41	1890	8.50	500	8.33	398	8.08	249	11.41	2740	11.91	3240	9.54	1230	9.25	1010	8.17	302	8.08	249
4	7.83	125	9.50	1200	10.41	1890	8.58	550	8.33	398	8.08	249	11.99	3330	11.83	3150	8.92	785	9.25	1010	8.21	326	8.08	249
5	7.83	125	9.50	1200	10.54	1990	8.58	550	7.91	155	8.08	249	12.10	3450	11.50	2820	8.42	452	9.21	985	8.17	302	8.08	249
6	7.71	88	9.50	1200	10.62	2060	8.58	550	8.00	205	8.08	249	12.00	3340	11.33	2670	8.29	374	9.17	960	8.17	302	8.08	249
7	7.71	88	9.50	1200	10.75	2160	8.58	550	8.00	205	8.08	249	11.91	3240	11.16	2510	8.58	550	8.75	665	8.17	302	7.96	183
8	7.83	125	9.41	1130	10.83	2220	8.75	665	8.00	205	8.08	249	12.00	3340	9.91	1510	9.21	985	9.33	1070	8.33	398	8.08	249
9	7.83	125	9.33	1070	10.91	2290	8.83	720	8.00	205	8.08	249	12.00	3340	8.50	500	9.17	960	9.67	1330	8.17	302	8.25	350
10	7.91	155	9.33	1070	11.37	2700	8.83	720	7.83	125	8.08	249	11.75	3070	9.25	1010	9.17	960	10.00	1570	8.17	302	8.21	326
11	7.91	155	9.08	895	11.33	2670	8.83	720	7.83	125	8.08	249	11.75	3070	10.50	1960	9.08	895	10.04	1600	8.08	249	8.00	205
12	7.85	132	9.08	895	11.21	2560	8.83	720	7.83	125	8.16	296	11.66	2980	10.58	2020	8.92	785	10.08	1630	8.08	249	7.96	183
13	7.87	140	9.12	925	11.04	2410	8.75	665	7.83	125	8.16	296	11.58	2900	10.54	1990	8.83	720	10.12	1670	8.17	302	8.25	350
14	7.87	140	9.12	925	10.91	2290	8.75	665	7.83	125	8.16	296	11.46	2780	10.41	1890	9.08	895	10.50	1960	8.17	302	7.96	183
15	7.87	140	9.12	925	10.71	2130	8.75	665	7.83	125	8.16	296	11.33	2670	9.96	1540	9.38	1110	10.29	1790	8.25	350	8.02	216
16	7.87	140	9.12	925	10.50	1960	8.66	605	7.83	125	8.16	296	11.21	2560	9.83	1450	9.50	1200	10.13	1670	8.25	350	8.00	205
17	8.08	249	8.91	775	10.50	1960	8.66	605	7.83	125	8.16	296	11.00	2370	8.79	695	9.25	1010	10.62	2060	8.25	350	8.00	205
18	8.16	296	8.91	775	10.50	1960	8.66	605	7.83	125	8.08	249	11.00	2370	8.83	720	9.12	925	10.38	1860	8.25	350	7.83	125
19	8.45	470	8.83	720	10.41	1890	8.66	605	7.83	125	8.08	249	11.00	2370	8.91	775	9.17	960	10.42	1900	8.42	452	7.83	125
20	8.75	665	8.75	665	10.41	1890	8.66	605	7.83	125	8.08	249	11.08	2440	9.16	950	9.35	1090	10.46	1930	8.42	452	7.83	125
21	8.46	476	8.46	476	10.25	1760	8.66	605	7.83	125	8.08	249	11.08	2440	8.99	835	9.33	1070	10.08	1630	8.42	452	7.83	125
22	8.41	446	8.46	476	10.25	1760	8.66	605	7.83	125	8.08	249	11.08	2440	8.83	720	9.21	985	10.08	1630	8.42	452	7.83	125
23	9.41	1130	8.45	470	9.91	1510	8.33	398	8.00	205	8.08	249	12.62	4090	8.62	580	9.08	895	10.00	1570	8.33	398	7.83	125
24	9.50	1200	8.52	515	9.33	1070	8.33	398	8.00	205	8.16	296	12.91	4460	8.50	500	9.00	840	8.83	720	8.29	374	7.83	125
25	9.54	1230	8.50	500	9.25	1010	8.54	525	8.00	205	8.08	249	13.00	4580	8.33	398	8.58	550	8.92	785	8.25	350	7.75	100
26	9.78	1410	8.50	500	9.25	1010	8.58	550	8.08	249	8.08	249	13.16	4790	8.33	398	8.83	720	9.42	1140	8.25	350	7.69	83
27	10.08	1630	8.75	665	9.08	895	8.66	605	8.08	249	8.16	296	13.00	4580	8.33	398	8.50	500	9.50	1200	8.25	350	7.67	79
28	10.00	1570	8.79	695	9.08	895	8.50	500	8.08	249	8.16	296	13.00	4580	9.37	1100	8.58	550	8.83	720	8.25	350	7.69	83
29	9.91	1510	8.87	750	9.00	840	8.50	500	.....	....	8.45	470	12.79	4580	9.58	1260	9.08	895	8.75	665	8.25	350	7.67	79
30	9.91	1510	9.70	1350	8.91	775	8.50	500	.....	....	9.16	950	12.50	3930	9.78	1410	9.08	895	8.75	665	8.08	249	7.79	112
31	9.62	1290	.....	.....	8.91	775	8.50	500	.....	....	10.37	1860	.....	....	10.00	1580	.....	.....	8.71	635	8.08	249	.....	.....

Monthly Discharge of Muskoka River (North Branch) near Port Sydney for 1916-7

Drainage Area, 560 Square Miles

Month	Discharge in Second-feet			Discharge in Second-feet per Square Mile.			Run-off
	Maximum	Minimum	Mean	Maximum	Minimum	Mean	Depth in Inches on Drainage Area
October (1916)	1,570	88	552	2.80	.16	.99	1.14
November "	1,390	470	895	2.48	.84	1.60	1.79
December "	2,700	775	1,776	4.82	1.38	3.17	3.63
January (1917)	775	398	591	1.38	.71	1.06	1.22
February	398	125	198	.71	.22	.35	.36
March	1,860	249	344	3.32	.44	.61	.70
April	4,790	1,890	3,229	8.55	3.38	5.77	6.43
May	3,520	398	1,530	6.29	.71	2.73	3.15
June	1,630	374	899	2.91	.67	1.61	1.80
July	2,060	635	1,281	3.68	1.13	2.29	2.64
August	452	249	345	.81	.44	.62	.71
September	350	79	185	.62	.14	.33	.37
The year	4,790	79	989	8.55	.14	1.77	23.97

Muskoka River (South Branch) at Tretheway's Falls

Location—At small steel highway bridge known as Tretheway's Falls Bridge, about 1 mile south of the Muskoka Falls Post Office, and about 7 miles south of the Town of Bracebridge, Township of Draper, Muskoka District.

Records Available—Discharge measurements from August, 1912. Daily gauge heights from June 4, 1914.

Drainage Area—668 square miles.

Gauge—As there is no available place for establishing a permanent staff gauge, a bench mark (elevation 25.00), painted on a stringer, on the up-stream side of the bridge, is used in ascertaining the water elevation, by measuring down to the surface of the stream with a graduated staff. It is referred to a bench mark (elevation 33.08) painted on a large rock on the right bank, 90 feet to the right of the downstream side of the bridge.

Channel and Control—Straight for about 300 feet above and 300 feet below the station. The banks are fairly high, rocky and wooded and will not overflow. The current is very swift and the bed of stream is rough and rocky, with a heavy slope about 250 feet below the section.

Discharge Measurements—Made from the downstream side of the bridge with a Price current meter and a stay line.

Winter Flow—The gauge is located where the current is swift and ice seldom forms across the river for the entire width. The relation of gauge height to discharge is but slightly affected by ice.

Accuracy—Measurements made at Black's Bridge 1 mile above, were used in conjunction with those made at Tretheway's Falls, and a fairly well-defined rating curve has been established. Open water curve used throughout the year.

Observer—Wesley Morrow, Muskoka Falls.

Discharge Measurements of Muskoka River (South Branch) at Tretheway's Falls in 1916-7

Date	Hydrographer	Width in Feet	Area of Section in Sq. Feet	Mean Velocity in Feet per Sec.	Gauge Height in Feet	Discharge in Sec-Feet	Discharge in Second-feet per Square Mile
1916							
Oct. 12....	Murray, W. S...	42	129	2.55	12.92	330	.....
Nov. 29....	"	89	1,427	.64	14.84	909 (a)	.....
1917							
Jan. 17....	"	52	258	4.80	15.25	1,239	.....
Feb. 13....	"	50	216	2.95	14.50	636	.....
Mar. 21....	"	50	168	2.28	13.45	386 (b)	.....
April 10....	"	89	1,547	.89	15.80	1,379 (a)	.....
May 9....	"	105	1,702	1.41	17.50	2,409 (a)	.....
June 20....	Campbell, L. L...	104	1,633	1.11	16.33	1,820 (a)	.....
July 25....	Ronald, F	47	225	4.18	14.58	941	.....
Aug. 25....	"	48	209	2.20	14.08	464	.....
Sept. 25....	"	39	180	1.64	13.54	296	.....
Oct. 30....	"	40	179	2.05	13.83	368	.....

(a) Reading taken at Black's bridge.
(b) Ice may affect.

Daily Gauge Height and Discharge of Muskoka River (South Branch) at Tretheway's Falls for 1916-7

Drainage Area, 668 Square Miles

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge
	Feet	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*
1	13.17	385	13.59	302	14.75	755	15.92	1400	14.67	715	14.09	456	16.00	1450	18.67	3540	16.00	1450	16.00	1450	14.50	630	14.00	425
2	13.17	385	13.59	302	14.67	715	15.84	1350	14.59	675	14.09	456	16.17	1550	18.67	3540	15.84	1350	16.00	1450	14.33	550	14.00	425
3	13.17	385	13.67	323	14.50	630	15.75	1300	14.50	630	14.00	425	16.50	1750	18.59	3450	15.67	1250	16.00	1450	14.33	550	14.00	425
4	13.17	385	13.67	323	14.42	590	15.67	1250	14.50	630	14.00	425	16.75	1900	18.50	3350	15.83	1350	16.00	1450	14.33	550	14.00	425
5	13.09	374	13.67	323	14.42	590	15.50	1150	14.50	630	14.00	425	16.84	1960	18.34	3180	15.83	1350	16.00	1450	14.33	550	14.00	425
6	13.09	374	13.75	345	14.92	840	15.34	1050	14.42	590	13.92	397	17.00	2070	18.00	2860	16.00	1450	16.00	1450	14.25	520	13.92	397
7	13.09	374	13.75	345	15.34	1050	15.17	965	14.42	590	13.84	372	16.50	1750	17.67	2560	16.00	1450	16.00	1450	14.33	550	13.92	397
8	13.09	374	13.75	345	15.67	1250	15.17	965	14.42	590	13.75	345	16.00	1450	17.50	2420	16.17	1550	16.00	1450	14.42	590	13.92	397
9	13.09	374	13.84	372	15.84	1350	15.09	925	14.50	630	13.59	302	16.00	1450	17.42	2360	16.17	1550	16.00	1450	14.33	550	13.92	397
10	13.09	374	13.84	372	16.09	1500	15.42	1100	14.59	675	13.50	280	16.00	1450	17.34	2310	16.00	1450	16.00	1450	14.42	590	13.92	397
11	13.09	374	13.84	372	16.17	1550	15.67	1250	14.59	675	13.42	264	16.25	1600	17.17	2190	15.67	1250	16.00	1450	14.42	590	13.92	397
12	13.09	374	13.92	397	16.25	1600	15.67	1250	14.50	630	13.42	264	16.67	1850	17.00	2070	16.00	1450	16.00	1450	14.33	550	13.83	369
13	13.00	365	13.92	397	16 25	1600	15.59	1200	14.50	630	13.42	264	17.00	2070	17.00	2070	16.17	1550	15.67	1250	14.33	550	13.83	369
14	13.00	365	13.84	372	16.34	1650	15.50	1150	14.42	590	13.34	248	17.00	2070	17.00	2070	16.33	1650	15.50	1150	14.25	520	13.75	345
15	13.00	365	14.00	425	16.25	1600	15.42	1100	14.42	590	13.25	230	17.00	2070	16.84	1960	16.50	1750	15.50	1150	14.25	520	13.75	345
16	13.00	365	14.17	488	16.17	1550	15.42	1100	14.42	590	13.34	248	17.00	2070	16.50	1750	16.50	1750	15.50	1150	14.25	520	13.67	323
17	13.00	365	14.67	715	16.17	1550	15.42	1100	14.34	555	13.34	248	17.00	2070	16.34	1650	16.50	1750	15.50	1150	14.17	488	13.67	323
18	13.09	374	14.75	755	16.17	1550	15.34	1050	14.34	555	13.42	264	17.00	2070	16.17	1550	16.50	1750	15.33	1050	14.17	488	13.67	323
19	13.17	385	14 67	715	16.09	1500	15.34	1050	14.42	590	13.50	280	17.34	2310	16.00	1450	16.25	1600	15.33	1050	14.17	488	13.67	323
20	13.25	398	14.59	675	16.09	1500	15.25	1000	14.50	630	13.50	280	17.50	2420	15.84	1350	16.33	1650	15.25	1000	14.17	488	13.58	300
21	13.34	413	14.59	675	16.00	1450	15.17	965	14.42	590	13.42	264	17.84	2720	15.84	1350	16.67	1850	15.25	1000	14.17	488	13.58	300
22	13.34	413	14.50	630	16.00	1450	15.09	925	14.34	555	13.50	280	18.00	2860	15.84	1350	16.33	1650	15.25	1000	14.17	488	13.58	300
23	13.34	413	14.50	630	15.92	1400	15.09	925	14.17	488	13.67	322	18.00	2860	15.84	1350	16.33	1650	15.25	1000	14.17	488	13.50	280
24	13.42	430	14.50	630	15.84	1350	15.09	925	14.17	488	13.75	345	18.25	3090	15.84	1350	16.25	1600	15.00	880	14.17	488	13.50	280
25	13.42	430	14.50	630	15.75	1300	15.09	925	14.17	488	13.67	322	18.50	3350	15.67	1250	16.25	1600	14.58	670	14.08	453	13.50	280
26	13.50	450	14.59	675	15.75	1300	15.00	885	14.34	555	13.67	322	18.50	3350	15.67	1250	16.25	1600	15.00	880	14.08	453	13.50	280
27	13.50	450	14.59	675	15.67	1250	15.00	885	14.25	520	14.50	630	18.50	3350	15.50	1150	16.50	1750	15,50	1150	14.08	453	13.50	280
28	13.59	477	14.67	715	15.67	1250	15.00	885	14.17	488	14.84	800	18.67	3540	15.50	1150	16.50	1750	15.50	1150	14.08	453	13.50	280
29	13.59	477	14.84	800	15.84	1350	15.00	885	.....	....	15.50	1150	18.67	3540	15.50	1150	16.25	1600	15.58	1200	14.00	425	13.50	280
30	13.59	477	14.84	800	15.84	1350	14.84	800	.....	....	15.75	1300	18.67	3540	15.67	1250	16.00	1450	15.58	1200	14.00	425	13.50	280
31	13.59	477	.....	....	15.92	1400	14.67	715	.....	....	16.00	1450	.....	....	16.17	1550	.....	.....	15.50	1150	14.00	425	.....	.....

Monthly Discharge of Muskoka River (South Branch) at Tretheway's Falls for 1916-7

Drainage Area, 668 Square Miles

Month	Discharge in Second-feet			Discharge in Second-feet per Square Mile			Run-off
	Maximum	Minimum	Mean	Maximum	Minimum	Mean	Depth in Inches on Drainage Area
October (1916)	477	365	401	.71	.55	.60	.69
November "	800	302	517	1.20	.45	.77	.86
December "	1,650	590	1,283	2.47	.88	1.92	2.21
January (1917)	1,400	715	1,046	2.10	1.07	1.57	1.81
February	715	488	591	1.07	.73	.88	.92
March	1,450	230	441	2.17	.34	.66	.76
April	3,540	1,450	2,319	5.30	2.17	3.47	3.87
May	3,540	1,150	1,995	5.30	1.72	2.99	3.45
June	1,850	1,250	1,562	2.77	1.87	2.34	2.61
July	1,450	670	1,214	2.17	1.00	1.82	2.10
August	630	425	512	.94	.64	.77	.89
September	425	280	346	.64	.42	.52	.58
The year	3,540	230	1,021	5.30	.34	1.53	20.74

Napanee River near Napanee

Location—At Mink's Bridge, three miles from Napanee, near lot 1, concession 1, Township of Camden, County of Addington.

Records Available—Discharge measurements from August, 1915, and gauge readings from September 8, 1915.

Drainage Area—300 square miles.

Gauge—A boxed chain gauge on the right bank of the river 400 feet above the section. Nine feet of standard gauge plates. When the gauge reads zero the elevation of the water is 97.93.

Channel and Control—The channel is curved above the section to within 20 feet of the bridge, and is straight for 300 feet below. The right bank is high, while the left is comparatively low and liable to overflow. The bed of the stream is composed of rocks and gravel, not likely to shift.

Discharge Measurements—Made by wading at low stages and from bridge at high stages.

Winter Flow—Relation of gauge height to discharge is affected by ice.

Regulation—There are several power developments on the upper part of the river, and also lumber dams on tributary waters.

Accuracy—Two daily readings give only fair mean daily gauge heights.

Observer—Mrs. Dan. O'Shaughnessy, Napanee.

Discharge Measurements of Napanee River near Napanee in 1916-7

Date	Hydrographer	Width in Feet	Area of Section in Sq. Feet	Mean Velocity in Feet per Sec.	Gauge Height in Feet	Discharge in Sec-Feet	Discharge in Second-feet per Square Mile
1916							
Nov. 22	Campbell, L. L.	51	25	1.27	100.95	32	.....
1917							
Feb. 15 "	"	61	28	1.36	101.51	39 (a)	.....
Mar. 8 "	"	61	43	1.49	101.88	65 (a)	.....
Apr. 8 "	"	64	548	4.19	109.19	2,293	.....
" 27 "	"	64	254	3.12	104.43	791	.....
May 17 "	"	64	115	1.59	102.31	183	.....
June 15 "	"	64	123	1.65	102.40	204	.....
Aug. 16 "	Ronald, F.....	58	41	1.10	101.12	46	.....
Oct. 10 "	"	55	28	1.07	100.98	30	.....

(a) Ice measurement.

Daily Gauge Height and Discharge of Napanee River near Napanee for 1916-7

Drainage Area, 300 Square Miles

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge
	Feet	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*
1	101.30	48	101.03	34	101.22	52	101.38	58	101.63	53	101.97	77	108.45	2380	103.79	535	102.25	178	101.88	125	100.79	18	101.08	38
2	101.38	54	101.09	39	101.22	52	101.26	46	101.80	70	101.97	77	108.66	2470	103.83	550	102.25	178	101.88	125	101.04	35	101.08	38
3	101.30	48	100.97	29	101.13	43	101.38	58	101.76	66	101.92	72	109.70	2900	103.75	525	102.33	191	101.75	109	101.04	35	101.13	43
4	101.22	43	101.05	36	101.13	43	101.38	58	101.38	29	101.68	48	108.62	2450	103.62	486	102.50	220	101.75	109	101.00	31	101.17	47
5	101.22	43	101.05	36	101.18	48	101.38	58	101.76	66	101.97	77	108.45	2380	103.54	462	102.42	206	101.62	93	101.00	31	101.21	51
6	101.22	43	101.26	56	101.32	62	101.38	48	101.68	58	101.92	72	108.58	2430	103.42	425	102.29	184	101.38	68	101.04	35	101.21	51
7	101.22	43	101.38	68	101.32	62	101.38	48	101.59	49	101.92	72	109.20	2690	103.38	415	102.25	178	101.00	31	101.33	63	101.17	47
8	101.13	38	101.34	64	101.32	62	101.68	68	101.80	70	101.97	77	108.37	2350	103.21	372	102.25	178	101.25	55	101.33	63	101.17	47
9	101.13	38	101.22	52	101.32	62	101.72	72	101.84	74	101.97	77	108.12	2240	103.00	320	102.25	178	101.46	76	101.25	55	101.08	38
10	101.22	43	101.22	52	101.22	52	101.68	59	101.80	70	102.01	81	108.20	2270	102.75	268	102.96	311	101.46	76	101.25	55	101.00	31
11	101.22	43	101.22	52	101.34	54	101.68	58	101.63	53	102.09	90	107.83	2120	102.83	284	103.83	550	101.50	80	101.25	55	101.04	35
12	101.22	43	101.13	43	101.30	50	101.55	45	101.80	70	102.26	123	107.41	1940	102.75	268	102.71	260	101.46	76	101.25	55	101.08	38
13	101.22	43	101.22	52	101.30	50	101.80	70	101.72	62	102.18	113	107.33	1910	102.58	235	102.54	228	101.42	72	101.17	47	101.04	35
14	101.22	43	101.42	72	101.22	42	101.63	53	101.63	53	102.26	123	107.08	1800	102.33	191	102.50	220	101.50	80	101.17	47	101.00	31
15	101.22	43	101.26	56	101.22	42	101.76	66	101.72	62	102.13	107	106.83	1700	102.25	178	102.46	213	101.42	72	101.17	47	101.00	31
16	101.30	48	101.09	39	101.22	42	101.63	53	101.84	74	102.22	131	106.00	1340	102.25	178	102.33	191	101.42	72	101.17	47	100.96	28
17	101.30	48	101.05	36	101.18	38	101.63	53	101.80	70	102.59	200	106.13	1390	102.29	184	102.33	191	101.38	68	101.08	38	100.83	20
18	101.30	48	101.22	52	101.18	38	101.68	58	101.72	62	103.09	318	105.88	1290	102.21	172	102.29	184	101.38	68	101.00	31	100.83	20
19	101.30	48	101.22	52	101.13	34	101.63	53	101.76	66	102.92	302	106.00	1340	102.17	166	102.25	178	101.50	80	101.13	43	100.92	25
20	101.30	48	101.24	54	101.13	34	101.55	45	101.72	62	102.88	294	106.17	1410	102.21	172	102.25	178	101.42	72	101.04	35	101.08	38
21	101.30	48	101.18	48	101.13	34	101.68	58	101.72	62	103.05	332	105.79	1260	102.21	172	102.12	158	101.42	72	101.08	38	101.16	46
22	101.34	51	100.97	29	101.13	34	101.84	74	101.63	53	103.76	530	105.46	1120	102.21	172	102.08	152	101.21	51	101.08	38	100.92	25
23	101.47	62	100.97	29	101.13	34	101.72	62	101.72	62	104.63	815	105.21	1020	102.33	191	102.08	152	101.33	63	101.13	43	100.83	20
24	101.47	62	100.97	29	101.13	34	101.72	62	101.80	70	108.68	2480	104.96	930	102.38	199	102.08	152	101.34	64	101.17	47	100.67	14
25	101.42	58	100.97	29	101.05	27	101.59	49	101.63	53	107.97	2180	104.67	830	102.38	199	102.08	152	101.29	59	101.17	47	100.71	15
26	101.30	48	100.88	22	101.01	24	101.68	58	102.09	102	107.38	1930	104.54	785	102.33	191	102.04	147	101.34	64	101.17	47	100.92	25
27	101.22	43	101.26	56	101.05	27	101.55	45	101.92	72	107.92	2160	104.29	700	102.50	220	101.96	136	101.21	51	101.17	47	101.08	38
28	101.30	48	101.22	52	101.01	24	101.92	82	101.97	77	108.30	2320	104.17	660	102.46	213	101.79	114	101.33	63	101.25	55	101.33	63
29	101.38	54	101.22	52	101.38	58	101.54	44	.....	....	108.38	2350	104.18	660	102.46	213	101.83	119	101.33	63	101.21	51	101.58	89
30	101.42	58	101.22	52	101.18	38	101.79	69	.....	....	108.63	2450	104.00	605	102.33	191	101.83	119	101.42	72	101.04	35	101.33	63
31	101.38	54	.....	.....	101.22	42	101.83	73	.....	....	108.63	2450	.....	....	102.29	184	.....	....	101.33	63	101.04	35	.....	....

Monthly Discharge of Napanee River near Napanee for 1916-7

Drainage Area, 300 Square Miles

Month	Discharge in Second-feet			Discharge in Second-feet per Square Mile			Run-off
	Maximum	Minimum	Mean	Maximum	Minimum	Mean	Depth in Inches on Drainage Area
October (1916)	62	38	48	.21	.13	.16	.18
November "	72	22	46	.24	.07	.15	.17
December "	62	24	43	.21	.08	.15	.17
January (1917)	82	44	58	.27	.15	.19	.22
February	102	29	64	.34	.10	.21	.22
March.....	2,480	48	727	8.27	.16	2.42	2.79
April.....	2,900	605	1,646	9.67	2.02	5.49	6.12
May.....	550	166	275	1.83	.55	.92	1.06
June	550	114	193	1.83	.38	.64	.71
July.....	125	31	74	.42	.10	.25	.29
August	63	18	44	.21	.06	.15	.17
September.....	89	14	38	.30	.05	.13	.15
The year	2,900	14	271	9.67	.05	.90	12.25

Petawawa River near Petawawa

Location—About 1½ miles southwest of Petawawa station above C.P.R. bridge, near lot 15, concession 7, Township of Petawawa, County of Renfrew.

Records Available—Discharge measurements from October, 1915, and daily gauge heights from November 5, 1915.

Drainage Area—1,572 square miles.

Gauge—Temporary mark used from December 15, 1915, to February 29, 1916, to obtain water elevations afterwards reduced to same datum as permanent gauge, screwed to plank, bolted to large rock in river, back of Rantzs' house, 1,000 feet above the station, and 200 feet above the head of the rapids. This gauge has been used for gauge readings since March 1, 1916.

Channel and Control—The controlling section is a few hundred yards above the metering section. The river is straight for a few hundred feet each side of the section, but is crooked and fast for two miles below the section. The soundings for depth are taken for each metering as the water is fast and the river bed of stones may change slightly between meterings, and the depths do not change the same as the gauge readings.

Discharge Measurements—The discharge measurements for normal and low flows, summer and winter, are made by wading in fast water near the end of the straight stretch in the river downstream from the gauge. At high water measurements are made from the road bridge leading to Petawawa Military Camp.

Winter Flow—The control here is at fast water and only slightly affected by ice.

Accuracy—Gauge readings twice daily give good mean daily gauge height as the fluctuation at the gauge is slow.

Observer—Elsa Rantz, Petawawa.

Discharge Measurements of Petawawa River near Petawawa in 1916-7

Date	Hydrographer	Width in Feet	Area of Section in Sq. Feet	Mean Velocity in Feet per Sec.	Gauge Height in Feet	Discharge in Sec-Feet	Discharge in Second-feet per Square Mile
1916							
Oct. 28....	Campbell, L. L..	197	327	3.62	102.33	1,186	.....
Dec. 14....	"	206	362	3.68	102.42	1,333	.....
1917							
Mar. 14....	"	155	216	3.12	101.75	679 (a)	.....
May 3....	"	163	1,243	7.43	105.19	9,236(b)	.....
June 6....	"	163	770	4.23	103.42	3,256(b)	.....
July 20....	Ronald, F	163	1,212	2.79	103.75	3,388(b)	.....
Sept. 12....	"	163	279	2.88	101.92	797 (c)	.....
" 12....	"	196	252	2.92	101.92	736	.....
Oct. 17....	"	155	182	2.37	101.56	433	.....

(a) Ice on lake above section and at gauge.
(b) Reading taken at highway bridge. Surface velocities observed and co-efficient applied.
(c) Reading taken at highway bridge.

Daily Gauge Height and Discharge of Petawawa River near Petawawa for 1916-7

Drainage Area, 1,572 Square Miles

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge
	Feet	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*
1	101.54	585	102.38	1240	102.17	1010	102.33	1180	102.33	1180	101.92	760	102.38	1240	105.08	8530	103.54	2970	102.92	1920	103.42	2740	102.42	1280
2	101.50	560	102.42	1280	102.25	1100	102.38	1240	102.29	1140	101.88	720	102.50	1380	105.17	9070	103.50	2890	102.92	1920	103.37	2650	102.33	1180
3	101.50	560	102.42	1280	102.33	1180	102.42	1280	102.25	1100	101.83	675	102.88	1860	105.21	9320	103.50	2890	102.88	1860	103.25	2440	102.33	1180
4	101.50	560	102.46	1330	102.33	1180	102.42	1280	102.25	1100	101.83	675	103.17	2300	105.21	9320	103.46	2810	102.83	1790	103.17	2300	102.25	1100
5	101.50	560	102.50	1380	102.33	1180	102.42	1280	102.25	1100	101.83	675	103.38	2660	105.08	8530	103.50	2890	102.83	1790	103.13	2240	102.25	1100
6	101.50	560	102.46	1330	102.33	1180	102.42	1280	102.25	1100	101.83	675	103.50	2890	105.08	8530	103.42	2740	102.83	1790	103.08	2160	102.17	1010
7	101.50	560	102.50	1380	102.33	1180	102.42	1280	102.25	1100	101.83	675	103.50	2890	104.88	7430	103.42	2740	102.67	1580	103.04	2100	102.17	1010
8	101.50	560	102.50	1380	102.33	1180	102.42	1280	102.25	1100	101.79	640	103.50	2890	104.71	6600	103.42	2740	102.21	1050	103.29	2500	102.17	1010
9	101.50	560	102.50	1380	102.38	1240	102.42	1280	102.21	1050	101.75	605	103.42	2740	104.62	6200	103.42	2740	102.21	1050	103.75	3420	102.08	920
10	101.50	560	102.42	1280	102.42	1280	102.42	1280	102.17	1010	101.75	605	103.29	2500	104.50	5690	103.42	2740	102.67	1580	103.67	3240	102.00	840
11	101.50	560	102.42	1280	102.38	1240	102.42	1280	102.17	1010	101.67	535	103.13	2240	104.46	5530	103.33	2570	103.12	2220	103.58	3050	102.00	840
12	101.50	560	102.42	1280	102.33	1180	102.42	1280	102.17	1010	101.67	535	103.08	2160	104.33	5060	103.33	2570	103.25	2440	103.54	2970	101.92	760
13	101.50	560	102.42	1280	102.33	1180	102.42	1280	102.08	920	101.75	605	103.00	2040	104.25	4790	103.33	2570	103.38	2660	103.50	2890	101.83	675
14	101.50	560	102.42	1280	102.38	1240	102.42	1280	102.08	920	101.75	605	102.96	1980	104.17	4540	103.33	2570	103.46	2810	103.17	2300	101.75	605
15	101.50	560	102.38	1240	102.42	1280	102.42	1280	102.08	920	101.75	605	102.92	1920	104.08	4270	103.25	2440	103.50	2890	102.75	1690	101.75	605
16	101.50	560	102.33	1180	102.42	1280	102.42	1280	102.08	920	101.75	605	102.92	1920	104.00	4050	103.25	2440	103.46	2810	102.75	1690	101.67	535
17	101.50	560	102.33	1180	102.42	1280	102.42	1280	102.08	920	101.67	535	102.92	1920	103.92	3830	103.25	2440	103.42	2740	102.83	1790	101.67	535
18	101.50	560	102.33	1180	102.42	1280	102.42	1280	102.08	920	101.67	535	102.96	1980	103.83	3600	103.25	2440	103.54	2970	102.83	1790	101.58	454
19	101.62	640	102.33	1180	102.42	1280	102.42	1280	102.08	920	101.67	535	103.21	2370	103.79	3510	103.17	2300	103.67	3240	102.83	1790	101.58	454
20	101.67	675	102.33	1180	102.42	1280	102.42	1280	102.04	880	101.67	535	103.50	2890	103.75	3420	103.25	2440	103.75	3420	102.83	1790	101.54	422
21	101.67	675	102.33	1180	102.42	1280	102.42	1280	102.00	840	101.62	488	103.92	3830	103.67	3240	103.17	2300	103.75	3420	102.75	1690	101.50	390
22	101.83	790	102.25	1100	102.42	1280	102.33	1180	102.00	840	101.58	454	104.21	4660	113.58	3050	103.13	2240	103.71	3320	102.75	1690	101.50	390
23	101.92	860	102.17	1010	102.42	1280	102.33	1180	102.00	840	101.58	454	104.46	5530	103.58	3050	103.08	2160	103.83	3600	102.67	1580	101.50	390
24	102.25	1050	102.17	1010	102.42	1280	102.33	1180	102.00	840	101.62	488	104.50	5690	103.67	3240	103.08	2160	103.92	3830	102.75	1680	101.50	390
25	102.25	1050	102.17	1010	102.42	1280	102.33	1180	101.96	800	101.67	535	104.50	5690	103.75	3420	102.54	1430	103.83	3600	102.67	1580	101.50	390
26	102.25	1050	102.17	1010	102.42	1280	102.33	1180	101.92	760	101.75	605	104.50	5690	103.75	3420	103.00	2040	103.75	3420	102.58	1480	101.50	390
27	102.25	1050	102.17	1010	102.38	1240	102.33	1180	101.92	760	101.83	675	104.58	6030	103.75	3420	102.92	1920	103.67	3240	102.58	1480	101.50	390
28	102.33	1230	102.17	1010	102.33	1180	102.33	1180	101.92	760	102.06	900	104.71	6600	103.75	3420	102.88	1860	103.58	3050	102.58	1480	101.50	390
29	102.33	1230	102.17	1010	102.33	1180	102.33	1180	.....	....	102.21	1050	104.96	7850	103.67	3240	102.88	1860	103.58	3050	102.50	1380	101.50	390
30	102.33	1230	102.17	1010	102.33	1180	102.33	1180	.....	....	102.25	1100	105.00	8070	103.67	3240	102.92	1920	103.58	3050	102.50	1380	101.58	454
31	102.33	1230	.....	....	102.33	1180	102.33	1180	.....	....	102.29	1140	.....	....	103.58	3050	.....	....	103.46	2810	102.50	1380	.....	....

Monthly Discharge of Petawawa River near Petawawa for 1916-7

Drainage Area, 1,572 Square Miles

Month	Discharge in Second-feet			Discharge in Second-feet per Square Mile			Run-off
	Maximum	Minimum	Mean	Maximum	Minimum	Mean	Depth in Inches on Drainage Area
October (1916)..	1,230	560	738	.78	.36	.46	.53
November " ..	1,380	1,010	1.196	.88	.64	.76	.85
December " ..	1,280	1,010	1,222	.81	.64	.78	.90
January (1917)...	1.280	1,180	1,243	.81	.75	.79	.91
February	1,180	760	956	.75	.48	.61	.64
March.....	1,140	454	652	.73	.29	.41	.47
April.....	8,070	1,240	3,480	5.13	.79	2.21	2.47
May.....	9,320	3,050	5,084	5.93	1.94	3.23	3.72
June.....	2,970	1,430	2,427	1.89	.91	1.54	1.72
July.....	3,830	1,050	2,610	2.44	.67	1.66	1.91
August	3,420	1,380	2,075	2.18	.88	1.32	1.52
September	1,280	390	683	.81	.25	.43	.48
The year	9,320	390	1,870	5.93	.25	1.19	16.15

Seguin River near Parry Sound

Location—700 feet below Mountain Dam, two miles above the highway bridge, and about seven miles above the Town of Parry Sound, Township of McDougall, Parry Sound District.

Records Available—Discharge measurements from June, 1914. Daily gauge heights from August 1, 1915, to December 31, 1917.

Drainage Area—380 square miles.

Gauge—Vertical steel staff with enamelled face, graduated in feet and inches, firmly wedged in rock on left shore 200 feet below dam. Zero of gauge (elev. 8.00 feet) is referred to a bench mark (elev. 15.00 feet) painted on a large rock directly across stream from gauge.

Channel—Both banks are high, wooded and not liable to overflow. The bed of the stream is composed of rocks and boulders, slightly shifting. The current is swift, and flows through one channel at all stages.

Discharge Measurements—Made by wading with a Price current meter. During high water, measurements are made at the highway bridge at the head of Mill Lake, 2 miles below wading section.

Winter Flow—Ice forms along the banks of river at the station during the winter months. The river is entirely covered with ice for a considerable distance above and below station.

Regulation—The dam 700 feet above gauging station causes fluctuation of river at gauge.

Accuracy—Estimates of flow at this station cannot be considered better than fair.

Observer—Percy Burnside, Parry Sound.

Discharge Measurements of Seguin River near Parry Sound in 1916-7

Date	Hydrographer	Width in Feet	Area of Section in Sq. Feet	Mean Velocity in Feet per Sec.	Gauge Height in Feet	Discharge in Sec-Feet	Discharge in Second-feet per Square Mile
1916							
Oct. 11	Murray, W. S.	91	125	1.52	10.66	190	.....
1917							
Jan. 18	"	63	450	.64	11.91	291(a)	.....
Feb. 22	"	63	247	.73	10.58	181(a)	.....
Mar. 29	"	63	317	3.54	11.33	1,124(b)	.....
" 31	"	63	450	3.28	12.50	1.475(b)	.....
April 5	"	63	569	6.18	14.00	3,517(c)	.....
" 5	"	63	406	.63	22.70	257(d)	.....
" 6	"	63	575	6.28	14.10	3,615(c)	.....
" 6	"	63	393	.52	22.50	206(d)	.....
May 8	"	63	519	1.43	11.83	742(c)	.....
June 20	Campbell, L. L.	63	576	1.08	11.58	620(c)	.....
July 24	Ronald, F.	63	550	1.31	11.71	722(c)	.....
Aug. 23	"	60	67	2.41	10.71	162	.....
Sept. 23	"	51	52	1.34	10.14	71	.....

(a) Reading taken at highway bridge. Ice measurement.
(b) Reading not reliable owing to operation of Mill Lake dam below section.
(c) Reading taken at highway bridge.
(d) Readings taken at Portage Creek which enters Seguin River between gauge and high-water section.

Daily Gauge Height and Discharge of Seguin River near Parry Sound for 1916-7

Drainage Area, 380 Square Miles

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge
	Feet	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*
1	10.50	170	12.08	980	12.16	965	12.16	410	11.25	110	10.50	58	12.83	1780	13.16	2170	11.42	492	11.50	540	11.33	445	10.42	124
2	10.50	170	12.00	910	12.16	965	12.16	410	11.25	110	10.50	65	13.00	1980	13.16	2170	11.33	445	11.50	540	11.25	405	10.42	124
3	10.41	156	12.00	910	12.25	965	12.16	410	11.16	92	10.50	65	13.00	1980	12.00	910	11.42	492	11.50	540	11.17	365	10.42	124
4	10.41	156	12.00	910	12.33	935	12.08	370	11.16	92	10.50	65	13.83	3060	12.08	980	11.42	492	11.50	540	10.00	50	10.33	106
5	10.33	145	12.00	910	12.41	920	12.08	370	11.16	92	10.50	65	14.00	3280	12.25	1150	11.50	540	11.50	540	10.08	62	10.33	106
6	10.33	145	12.00	910	12.50	910	12.08	370	11.16	92	10.50	80	14.08	3390	12.25	1150	11.50	540	11.42	492	10.17	75	10.33	106
7	10.33	145	12.08	980	12.66	965	12.08	370	11.08	77	10.41	80	14.08	3390	12.16	1060	11.50	540	11.42	492	10.17	75	10.33	106
8	10.33	145	12.08	980	12.75	955	12.08	370	11.08	77	10.41	80	14.25	3620	11.83	775	11.50	540	11.42	492	10.25	90	10.33	106
9	10.33	145	12.08	980	12.91	1010	12.08	370	11.00	65	10.33	80	14.25	3620	11.83	775	11.50	540	11.42	492	10.33	106	10.42	124
10	10.33	145	12.16	1060	12.75	790	12.00	330	11.00	65	10.33	80	14.25	3620	11.83	775	11.50	540	11.42	492	10.33	106	10.42	124
11	10.41	156	12.16	1060	12.75	790	12.00	330	11.00	65	10.33	65	14.25	3620	11.83	775	11.50	540	11.33	445	10.33	106	10.50	140
12	10.41	156	12.16	1060	12.75	790	12.00	330	11.00	65	10.25	65	14.08	3390	11.75	715	11.42	492	11.33	445	10.75	205	10.58	160
13	10.50	170	12.16	1060	12.66	720	12.00	330	11.08	77	10.25	65	14.08	3390	11.75	715	11.42	492	11.25	405	11.00	290	10.58	160
14	10.54	178	12.16	1060	12.66	720	12.00	330	11.08	77	10.25	65	14.00	3280	11.66	650	11.42	492	11.25	405	10.75	205	10.67	182
15	10.50	170	12.16	1060	12.66	720	12.00	330	11.08	77	10.16	65	14.00	3280	11.66	650	11.42	492	11.25	405	10.67	182	10.75	205
16	10.58	186	12.16	1060	12.66	720	12.00	330	11.08	77	10.08	50	14.00	3280	11.58	590	11.42	492	11.33	445	10.67	182	10.75	205
17	10.58	186	12.16	1060	12.66	720	12.00	330	11.08	77	10.00	40	13.83	3060	11.58	590	11.50	540	11.33	445	10.67	182	10.67	182
18	10.66	208	12.25	1150	12.58	665	11.91	294	11.00	65	10.00	40	13.83	3060	11.50	540	11.58	590	11.33	445	10.67	182	10.67	182
19	10.66	208	12.16	1060	12.58	665	11.91	294	10.91	52	10.00	40	13.75	2950	11.50	540	11.58	590	11.42	492	10.67	182	10.58	160
20	10.75	235	12.08	980	12.50	610	11.91	294	10.75	35	10.00	40	13.66	2830	11.50	540	11.58	590	11.42	492	10.67	182	10.58	160
21	10.83	260	12.08	895	12.41	545	11.83	265	10.66	36	10.00	40	13.66	2830	11.41	486	11.67	660	11.42	492	10.67	182	10.50	140
22	11.00	325	12.00	830	12.33	500	11.83	265	10.58	38	10.00	40	13.66	2830	11.33	445	11.67	660	11.42	492	10.67	182	10.50	140
23	11.16	400	12.00	830	12.25	455	11.75	238	10.58	38	10.08	48	13.66	2830	11.33	445	11.67	660	11.50	540	10.67	182	10.25	90
24	11.41	540	11.91	760	12.25	455	11.75	238	10.58	38	10.08	48	13.66	2830	11.25	405	11.67	660	11.67	660	10.58	160	10.17	75
25	11.58	655	11.91	760	12.25	455	11.66	208	10.58	48	10.08	48	13.58	2720	11.25	405	11.67	660	11.67	660	10.58	160	10.17	75
26	11.75	785	11.91	760	12.16	410	11.58	185	10.58	48	10.16	59	13.58	2720	11.25	405	11.67	660	11.67	660	10.58	160	10.08	62
27	11.91	930	12.00	830	12.16	410	11.50	165	10.58	62	10.16	74	13.58	2720	11.25	405	11.58	590	11.67	660	10.50	140	10.08	62
28	12.08	1090	12.00	830	12.16	410	11.50	165	10.58	62	10.83	230	13.58	2720	11.33	445	11.58	590	11.58	590	10.50	140	10.00	50
29	12.08	1090	12.08	895	12.16	410	11.50	165	.....	....	11.33	445	13.50	2620	11.33	445	11.50	540	11.50	540	10.42	124	10.00	50
30	12.08	1090	12.16	965	12.16	410	11.41	142	.....	....	11.83	775	13.33	2390	11.33	445	11.50	540	11.42	492	10.42	124	9.83	33
31	12.08	1090	.....	....	12.16	410	11.33	126	.....	....	12.50	1410	.....	....	11.41	486	.....	....	11.42	492	10.42	124	.....	....

Monthly Discharge of Seguin River near Parry Sound for 1916-7

Drainage Area, 380 Square Miles

Month	Discharge in Second-feet			Discharge in Second-feet per Square Mile			Run-off
	Maximum	Minimum	Mean	Maximum	Minimum	Mean	Depth in Inches on Drainage Area
October (1916)	1,090	156	375	2.87	.41	.99	1.14
November "	1,150	760	950	3.03	2.00	2.50	2.79
December "	1,010	410	689	2.66	1.08	1.81	2.09
January (1917)	410	126	295	1.08	.33	.78	.90
February	110	35	68	.29	.09	.18	.19
March.....	1,410	40	144	3.71	.11	.38	.44
April	3,620	1,780	2,969	9.53	4.68	7.81	8.71
May	2,170	405	743	5.71	1.07	1.96	2.26
June	660	445	556	1.74	1.17	1.46	1.63
July.....	660	405	512	1.74	1.07	1.35	1.56
August.....	445	50	173	1.17	.13	.46	.53
September.....	205	33	122	.54	.09	.32	.36
The year	3,620	33	632	9.53	.09	1.66	22.57

Tay River near Glen Tay

Location—Near lots 20 and 21, concession 11, Township of Bathurst, County of Lanark. At the highway bridge north of the Village of Glen Tay, and east of the auxiliary plant of the Canadian Electric & Water Company, Limited, of Perth and Ottawa.

Records Available—Discharge measurements July, 1915, and gauge readings from July 10, 1915.

Drainage Area—204 square miles.

Gauge—Vertical steel staff 0 to 3 feet fastened to the pier of bridge one foot above section.

Channel and Control—The channel is straight from the dam 150 feet above and straight for 250 feet below the section. The banks are high, and not liable to overflow. The bed of the river is composed of shale and stones, not shifting. The flow is confined between the bridge abutments at all stages. The control is a short distance below the section, and the flood flow is likely to disturb it to some extent.

Discharge Measurements—Made by wading at ordinary stages, and from the bridge at very high stages.

Winter Flow—Channel at section likely free from ice during winter, but will be affected by ice formation below the section.

Regulation—The river is dammed immediately above the section and one mile further up, for power purposes, and the Department of Railways and Canals operate a dam at the foot of Bob's Lake for regulating canal purposes.

Accuracy—The open-water rating will be very good.

Observer—Paul Griffin, Manion P.O.

Discharge Measurements of Tay River near Glen Tay in 1916-7

Date	Hydrographer	Width in Feet	Area of Section in Sq. Feet	Mean Velocity in Feet per Sec.	Gauge Height in Feet	Discharge in Sec-Feet	Discharge in Second-feet per Square Mile
1916							
Oct. 12....	Campbell, L. L..	35	32	2.27	94.05	72	.....
Dec. 18....	" ..	29	27	1.26	93.84	33	.....
1917							
March 6....	" ..	36	28	2.22	93.90	62 (a)	.....
April 2....	" ..	48	117	4.61	95.38	537	.....
" 25....	" ..	41	62	4.16	94.44	256	.....
May 15....	Hattou	41	58	3.79	94.38	218	.....
June 16....	"	40	51	3.31	94.30	168	.....
Aug. 17....	Ronald, F.....	39	65	4.76	94.25	317	.....
Oct. 3....	"	36	29	2.15	93.96	62	.....

(a) Section partly ice covered.

Daily Gauge Height and Discharge of Tay River near Glen Tay for 1916-7

Drainage Area, 204 Square Miles

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge
	Feet	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*
1	94.46	188	94.13	106	93.88	48	93.98	66	93.80	38	94.09	68	95.32	520	94.44	214	94.11	98	94.17	120	94.34	179	94.23	140
2	94.05	71	93.88	48	93.88	48	93.98	66	93.80	38	94.09	68	95.34	530	94.42	207	94.09	92	94.15	112	94.38	193	94.24	144
3	94.09	79	94.13	106	93.88	48	93.94	59	93.80	38	93.96	46	95.44	565	94.28	158	94.05	82	94.13	106	94.36	186	94.07	88
4	94.09	79	93.88	48	93.96	62	93.94	59	93.80	38	93.92	41	95.23	490	94.46	221	94.03	78	94.13	106	94.36	186	94.07	88
5	94.05	71	94.13	106	93.92	55	93.94	59	93.80	38	94.07	64	94.94	389	94.44	214	94.21	134	94.09	92	94.49	232	94.07	88
6	94.25	119	93.88	48	93.88	48	93.98	66	93.80	38	94.07	64	94.82	347	94.17	120	94.21	134	94.07	88	94.32	172	94.07	88
7	94.05	71	93.88	48	93.88	48	94.17	120	93.80	38	94.07	64	95.07	434	94.21	134	94.25	148	94.05	82	94.26	151	94.28	158
8	94.05	71	93.88	48	93.88	48	93.94	59	93.82	41	94.07	64	94.96	396	94.07	88	94.19	126	94.07	88	94.28	158	94.13	106
9	94.05	71	93.92	55	93.88	48	93.96	62	93.86	46	94.13	78	94.84	354	94.07	88	94.17	120	94.06	85	94.44	214	94.11	98
10	94.05	71	94.21	134	93.88	48	93.98	66	93.86	46	94.03	57	94.61	274	94.07	88	93.96	62	94.06	85	94.36	186	94.30	165
11	94.05	71	93.88	48	93.84	43	93.96	62	94.19	126	94.07	64	94.59	266	94.07	88	94.07	88	94.06	85	94.38	193	94.30	165
12	94.05	71	93.88	48	93.88	48	93.92	55	93.92	55	94.07	64	94.59	266	94.07	88	94.27	154	94.11	98	94.54	249	94.11	98
13	94.05	71	93.88	48	93.88	48	93.92	55	93.92	55	94.05	60	94.53	246	94.09	92	94.27	154	94.18	123	94.30	165	94.13	106
14	94.05	71	93.88	48	93.84	43	93.91	53	94.07	88	94.03	57	94.55	252	94.09	92	94.50	235	94.19	126	94.30	165	94.38	193
15	94.01	63	93.88	48	93.80	38	93.91	53	93.96	62	94.11	72	94.51	238	94.09	92	94.34	179	94.19	126	94.28	158	94.17	120
16	94.01	63	94.17	120	93.80	38	93.91	53	93.98	66	94.21	98	94.48	228	94.07	88	94.34	179	94.19	126	94.26	151	94.13	106
17	93.96	56	94.17	120	93.80	38	93.88	48	93.96	62	94.23	106	94.42	207	94.05	82	94.32	172	94.38	193	94.23	140	94.11	98
18	94.01	63	93.88	48	93.82	41	93.88	48	94.11	98	94.25	112	94.42	207	94.05	82	94.32	172	94.19	126	94.21	134	94.13	106
19	93.96	56	93.88	48	93.84	43	93.88	48	94.03	78	94.17	88	94.40	200	94.05	82	94.32	172	94.21	134	94.28	158	94.11	98
20	94.01	63	94.13	106	93.84	43	93.88	48	94.09	92	93.90	38	94.19	126	94.03	78	94.21	134	94.23	140	94.26	151	94.28	158
21	94.01	63	93.88	48	93.86	46	93.86	46	94.44	214	94.01	53	94.48	228	94.07	88	94.23	140	94.26	151	94.38	193	94.11	98
22	94.05	71	94.13	106	93.88	48	93.84	43	94.13	106	93.96	46	94.53	246	94.23	140	94.21	134	94.28	158	94.19	126	94.28	158
23	94.01	63	94.13	106	93.86	46	93.84	43	94.07	88	93.98	48	94.34	179	94.09	92	94.17	120	94.26	151	94.38	193	94.07	88
24	93.96	56	93.88	48	93.86	46	93.84	43	94.01	53	94.28	123	94.21	134	94.21	134	94.17	120	94.17	120	94.31	168	94.23	140
25	93.96	56	93.92	55	93.88	48	93.84	43	94.15	82	95.23	490	94.40	200	94.44	214	94.15	112	94.23	140	94.30	165	94.21	134
26	93.96	56	94.17	120	93.88	48	93.84	43	94.11	72	97.30	1220	94.38	193	94.15	112	94.13	106	94.19	126	94.42	207	94.23	140
27	93.92	51	93.88	48	93.94	59	93.84	43	94.05	60	97.88	1420	94.34	179	94.17	120	94.13	106	94.21	134	94.07	88	94.21	134
28	93.92	51	93.88	48	93.94	59	93.82	41	94.07	64	97.71	1360	94.30	165	94.13	106	94.13	106	94.29	162	94.05	82	94.01	72
29	94.13	88	93.88	48	94.01	72	93.80	38	.....	....	97.09	1140	94.30	165	94.17	120	94.15	112	94.34	179	94.05	82	94.01	72
30	94.17	98	93.88	48	93.98	66	93.80	38	.....	....	96.34	880	94.26	151	94.11	98	94.13	106	94.38	193	94.09	92	94.19	126
31	94.13	88	.....	....	93.96	62	93.80	38	.....	....	95.63	630	.....	....	94.11	98	.....	....	94.38	193	94.23	140	.....	....

Monthly Discharge of Tay River near Glen Tay for 1916-7

Drainage Area, 204 Square Miles

Month	Discharge in Second-feet			Discharge in Second-feet per Square Mile			Run-off
	Maximum	Minimum	Mean	Maximum	Minimum	Mean	Depth in Inches on Drainage Area
October (1916)	188	51	74	.92	.25	.36	.42
November "	134	48	70	.66	.24	.34	.38
December "	66	38	49	.32	.19	.24	.28
January (1917)	120	38	54	.59	.19	.26	.30
February	214	38	69	1.05	.19	.34	.35
March	1,420	41	283	6.96	.20	1.39	1.60
April	565	126	279	2.77	.62	1.37	1.53
May	221	78	120	1.08	.38	.59	.68
June	235	62	129	1.15	.30	.63	.70
July	193	82	127	.95	.40	.62	.71
August	249	82	163	1.22	.40	.80	.92
September	165	72	119	.81	.35	.58	.65
The year	1,420	38	128	6.96	.19	.63	8.51

York River near Bancroft

Location—At the highway bridge one and a half miles below Bancroft, near lots 53 and 54, west of the Hastings Road, Township of Faraday, County of Hastings.

Records Available—Discharge measurements from July, 1915. Daily gauge heights from July 16, 1915.

Drainage Area—374 square miles.

Gauge—Vertical standard gauge plates 0 to 6 ft. secured on the upstream face of the right bridge pier near the west corner.

Channel and Control—The channel is straight for 400 feet above and 250 feet below the section. The banks are high and sandy, not liable to overflow. The bed is composed of gravel. Flow takes place in two channels under the bridge at high stages, and in one channel at lower stages.

Discharge Measurements—Made from the bridge at all stages.

Winter Flow—Ice will materially affect the open-water relation of gauge heights to discharge, and frazil ice at times makes meterings difficult.

Regulation—The dam at Bancroft gives very small storage, and the plants there do not use the entire flow. On account of the electrical plant working at night, and the other mills during the day, daily gauge readings give fairly accurate figures for the mean daily stage. Some of the tributary streams are controlled by dams for storage and driving purposes for the lumber industry.

Accuracy—As the river bed is composed of gravel, slight movement no doubt takes place without changing the general profile and section.

Observer—J. L. Churcher, Bancroft.

Discharge Measurements of York River near Bancroft in 1916-7

Date	Hydrographer	Width in Feet	Area of Section in Sq. Feet	Mean Velocity in Feet per Sec.	Gauge Height in Feet	Discharge in Sec-Feet	Discharge in Second-feet per Square Mile
1916							
Oct. 11....	Campbell, L. L..	56	184	.73	100.83	135	.....
Nov. 20....	" ..	62	227	1.18	101.50	268 (a)	.....
Dec. 20....	" ..	56	388	1.59	104.60	618 (b)	.....
1917							
Mar. 10....	" ..	56	193	.81	102.50	157 (c)	.....
April 4....	Hatton	68	429	2.28	104.52	981	.....
May 18....	"	70	260	1.37	101.92	356	.....
June 13....	"	68	256	1.46	102.04	375	.....
Oct. 3....	Ronald, F.....	63	192	.76	100.92	145	.....

(a) Ice at sides of river above section.
(b) Ice on control.
(c) Ice measurement.

Daily Gauge Height and Discharge of York River near Bancroft for 1916-7

Drainage Area, 374 Square Miles

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge
	Feet	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*
1	100.67	113	101.04	179	102.42	324	103.71	419	102.58	190	102.56	182	102.92	570	106.13	1480	102.89	565	101.42	252	101.12	194	101.00	171
2	100.79	133	101.06	182	102.42	318	103.48	364	102.56	190	102.35	149	103.21	640	106.15	1490	102.67	510	101.42	252	101.00	171	100.97	166
3	100.88	149	101.10	190	102.32	282	103.33	308	102.57	190	102.40	153	103.83	805	106.15	1490	102.25	420	101.37	242	100.96	164	101.00	171
4	100.88	149	101.08	186	102.40	268	103.17	308	102.58	196	102.35	146	104.30	945	106.13	1480	102.00	368	101.38	244	101.16	201	101.00	171
5	100.92	157	101.06	182	102.46	260	103.19	308	102.57	194	102.38	155	104.42	980	106.06	1460	102.20	409	101.28	224	101.04	179	101.02	175
6	100.92	157	101.06	182	102.67	298	103.08	280	102.56	184	102.46	164	104.42	980	105.97	1430	102.45	462	101.27	222	101.15	200	101.02	175
7	100.88	149	101.08	186	102.67	278	103.08	280	102.56	184	102.46	167	104.44	980	105.85	1400	102.50	472	101.30	228	101.21	211	101.00	171
8	100.88	149	101.08	186	102 58	232	102.88	248	102.50	171	102.46	167	104.35	960	105.08	1170	102.71	520	101.33	234	101.13	196	101.00	171
9	100.96	164	101.11	192	102.71	258	102.96	260	102.50	171	102.52	190	104.35	960	104.75	1080	102.83	550	101.37	242	101.27	222	101.00	171
10	100.94	160	101.12	194	102.88	288	102.79	232	102.49	171	102.50	160	104.35	960	103.04	600	102.62	497	101.38	244	101.45	258	100.98	167
11	100.92	157	101.12	194	102.83	278	102.70	215	102.42	144	102.40	158	104.35	960	102.75	530	102.79	540	101.25	219	101.13	196	100.99	169
12	100.92	157	101.12	194	102.88	288	102.79	236	102.50	157	102.62	181	104.42	980	103.25	650	102.12	392	101.46	260	101.35	238	100.96	164
13	100.92	157	101.12	194	103.42	403	102.82	238	102.46	171	102.67	224	104.44	980	103.26	650	102.04	376	101.25	219	101.25	219	100.96	164
14	100.92	157	101.12	194	103.67	515	102.83	234	102.46	171	102.67	220	104.46	990	103.15	620	102.07	382	101.19	207	101.10	190	100.98	167
15	100.91	155	101.05	181	103.96	515	102.84	234	102.42	162	102.67	238	104.46	990	102.87	560	102.12	392	101.25	219	101.06	182	100.94	160
16	100.92	157	101.08	186	104.06	540	102.80	219	102.44	166	102.67	280	104.46	990	102.83	550	101.75	318	101.37	242	101.13	196	100.90	153
17	100.92	157	101.00	171	104.50	595	102.75	219	102.38	153	102.58	288	104.46	990	102.17	403	101.71	310	101.25	219	101.17	203	101 04	179
18	100.92	157	101.00	171	104.50	645	102.75	219	102.33	144	102.58	308	104.58	1020	102.04	376	101.66	300	101.20	209	101.08	186	100.94	160
19	101.04	179	101.04	179	104.42	615	102.67	209	102.29	139	102.67	334	104.58	1020	102.01	370	101.67	302	101.25	219	101.04	179	100.96	164
20	101.09	188	101.50	268	104.42	615	102.67	209	102.46	162	102.62	348	105.01	1150	102.00	368	101.50	268	101.32	232	101.08	186	100.98	167
21	101.19	207	101.60	288	104.52	605	102.67	209	102.38	157	102.62	368	105.59	1320	101.99	366	101.56	280	101.29	226	101.15	200	101.06	182
22	101.12	190	101.62	292	104.46	590	102.67	209	102.29	153	102.54	380	105.81	1380	102.07	382	101.57	282	101.10	190	101.10	190	101.06	182
23	101.08	186	101.63	294	104.66	640	102.68	209	102.46	171	102.62	409	105.94	1420	102.38	447	101.56	280	101.08	186	101.06	182	100.98	167
24	101.06	182	101.65	298	104.65	630	102.67	209	102.52	177	102.71	430	105.92	1420	102.45	462	101.56	280	101.17	203	101.15	200	100.96	164
25	101.04	179	101.66	300	104.73	645	102.63	205	102.40	157	102.71	489	106.29	1530	102.58	489	101.57	282	101.15	200	101.17	203	101.00	171
26	101.04	179	102.00	298	105.00	710	102.64	203	102.58	190	103.17	590	106.33	1540	102.29	428	101.42	252	101.15	200	101.04	179	101.02	175
27	101.04	179	102.29	328	104.73	650	102.61	196	102.58	190	104.42	860	106.35	1540	103.82	800	101.44	256	101.21	211	101.06	182	100.90	153
28	101.04	179	102.33	334	104.38	565	102.58	190	102.56	190	103.66	760	106.33	1540	103.70	770	101.44	256	101.00	171	101.04	179	100.90	153
29	101.04	179	102.33	322	104.22	530	102.63	200	.....	.....	103.30	660	106.21	1500	103.58	735	101.45	258	101.25	219	101.04	179	100.88	149
30	101.04	179	102.42	324	104.00	476	102.60	190	.....	.....	103.12	620	106.17	1490	103.31	665	101.43	254	101.12	194	101.02	175	100.92	157
31	101.04	179	.....	.....	103.88	376	102.58	190	.....	.....	102.67	510	.....	....	102.83	550	.....	.....	101.12	194	100.98	167	.....	....

Monthly Discharge of York River near Bancroft for 1916-7

Drainage Area. 374 Square Miles

Month	Discharge in Second-feet			Discharge in Second-feet per square mile			Run-off
	Maximum	Minimum	Mean	Maximum	Minimum	Mean	Depth in Inches on Drainage Area
October... (1916)	207	113	165	.56	.30	.44	.51
November "	324	171	229	.87	.46	.61	.68
December "	710	232	459	1.90	.62	1.23	1.42
January ..(1917)	419	190	240	1.12	.51	.64	.74
February	196	139	171	.52	.37	.46	.48
March.....	860	146	332	2.30	.39	.89	1.03
April	1,540	570	1,118	4.12	1.52	2.99	3.34
May.....	1,490	366	782	3.98	.98	2.09	2.41
June	565	252	368	1.51	.68	.98	1.09
July.....	260	171	220	.70	.46	.59	.68
August	258	164	194	.69	.44	.52	.60
September.....	182	149	167	.49	.40	.45	.50
The year	1,540	113	371	4.12	.30	.99	13.47

Regular Stations

NORTHERN ONTARIO DISTRICT

River	Location	Drainage Area Sq. Miles	Township	District
aux Sables	near Massey	524	Salter	Sudbury
Blanche	near Englehart	430	Evanturel	Temiskaming
Frederickhouse	at Frederickhouse	1,260	Clute	"
Kagawong	at Kagawong	94	Allan	Manitoulin Island
Mattagami	at Smooth Rock Falls	3,970	Kendry	Temiskaming
Mississagi	at Iron Bridge	3,565	Gladstone	Algoma
South	near Powassan	294	Himsworth	Parry Sound
Spanish	near Webbwood	4,340	Hallam	Sudbury
Sturgeon	near Smoky Falls	2,570	Field	Nipissing
Vermilion	near Whitefish	1,580	Graham	Sudbury
Wanapitei	at McVitties	1,190	Secord	"

aux Sables River at Massey

Location—About 800 feet upstream from C.P. Ry. bridge and ¼ mile northeast of railway station, in the Village of Massey, Township of Salter, Sudbury District.

Records Available—Discharge measurements from August, 1914. Daily gauge heights from June 10, 1915.

Drainage Area—524 square miles.

Gauge—A chain gauge has been established here reading zero with water at an elevation of 16.00 referred to a B.M. elevation 29.76 painted on top of rock on left bank at entrance to rapids. The gauge is located twenty feet below the section.

Channel and Control—Straight for 1,000 feet above and 100 feet below the gauging station to a rapid. Both banks are high, rocky, wooded, and are not liable to overflow. The bed of the stream is composed of clay and gravel, practically permanent. The velocity is moderate, and one channel exists at all stages.

Discharge Measurements—Made by wading during low water periods. At high stages measurements are made from boat with a Price current meter.

Regulation—The operation of logging dams above cause fluctuations in gauge heights during the log-driving season.

Observer—Jas. Blight, Massey.

Discharge Measurements of aux Sables River at Massey in 1916-7

Date	Hydrographer	Width in Feet	Area of Section in Sq. Feet	Mean Velocity in Feet per Sec.	Gauge Height in Feet	Discharge in Sec-Feet	Discharge in Second-feet per Square Mile
1916							
Feb. 4....	Murray, W. S...	75	155	2.55	18.04	393 (6)	.....
Mar. 9....	" ..	77	127	2.27	17.25	287 (7)	.....
Apr. 14....	" ..	96	964	2.32	26.40	2,241 (8)	.....
May 11....	" ..	97	822	2.15	24.20	1,772	.....
1917							
Feb. 19....	" ..	73	101	2.20	17.45	223(10)	.....
Mar. 12....	" ..	85	92	2.28	17.70	211(11)	.....
April 17....	" ..	97	653	1.58	22.50	1,032(12)	.....
May 14....	" ..	.....	.....	.....	24.04	.....	.....
June 21....	" ..	.....	.....	.....	.....	.....	.....
July 19....	" ..	100	870	2.18	25.29	1,891(13)	.....
Aug. 21....	Newland	75	120	2.31	17.20	278(14)	.....
Sept. 16....	Roberts, E.....	75	124	2.13	16.90	263	.....
Oct. 17....	"	74	109	1.75	16.70	191	.....

(6) Ice measurement.
(7) Ice measurement.
(8) B.M. gauge, elev. = 27.20.
(10) Ice measurement.
(11) Water on top of ice.
(12) Ice coming down river.
(13) Normal
(14) Normal.

Daily Gauge Height and Discharge of aux Sables River at Massey for 1916-7

Drainage Area, 524 Square Miles

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge
	Feet	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*
1	17.37	314	25.00	1860	21.37	910	22.19	1046	16.70	159	16.70	149	19.04	410	27.04	2430	26.62	2310	27.53	2560	20.95	885	17.20	248
2	17.37	314	24.87	1820	21.37	910	22.04	1010	16.70	159	16.70	145	19.04	426	27.04	2430	27.20	2470	27.45	2540	20.12	720	17.20	248
3	17.37	314	24.60	1760	21.37	910	21.91	980	16.70	159	16.70	145	19.20	452	27.04	2430	27.45	2540	27.45	2540	19.74	650	17.16	243
4	17.37	314	24.54	1730	21.37	890	21.83	960	16.70	159	16.70	145	19.45	492	26.95	2400	27.20	2470	27.32	2500	19.20	550	17.08	234
5	17.37	314	24.04	1600	21.37	890	21.66	925	16.70	159	16.70	145	20.45	690	26.95	2400	28.61	2870	27.24	2480	18.87	495	16.83	206
6	17.37	314	24.04	1600	21.37	890	21.54	900	16.70	159	16.83	151	20.62	720	26.95	2400	28.30	2780	27.20	2470	18.70	468	16.83	206
7	17.37	314	24.04	1600	21.37	890	21.45	885	16.70	159	17.08	158	20.87	770	26.87	2380	27.20	2470	27.28	2490	18.49	434	16.74	198
8	17.37	314	24.04	1600	23.50	1360	21.08	810	16.70	159	17.29	170	20.87	790	26.87	2380	27.86	2660	27.36	2520	18.20	388	16.70	194
9	17.37	314	24.04	1600	25.12	1780	20.62	720	16.70	159	17.49	185	21.04	820	26.66	2320	28.20	2750	27.36	2520	18.08	370	17.20	248
10	17.37	314	24.04	1600	26.70	2220	19.75	560	16.70	159	17.62	196	21.12	840	26.25	2200	28.98	2970	27.36	2520	18.03	362	17.20	248
11	17.45	324	24.04	1570	27.20	2360	19.00	436	16.70	159	17.70	203	21.12	860	25.58	2020	28.36	2800	27.36	2520	18.03	362	17.12	238
12	17.57	338	23.79	1510	27.24	2340	18.33	332	16.70	159	17.70	194	21.04	840	24.46	1710	28.53	2840	27.36	2520	18.03	362	17.08	234
13	17.57	338	23.62	1470	26.62	2170	17.83	264	16.70	159	17.70	194	20.99	850	24.08	1610	28.82	2920	27.36	2520	17.95	351	17.00	224
14	17.57	338	23.17	1350	25.99	1990	17.79	259	16.70	159	17.70	194	20.95	845	24.04	1600	28.20	2750	27.36	2520	17.95	351	16.87	210
15	17.54	335	22.45	1180	25.87	1960	17.66	243	16.70	159	17.70	194	20.91	855	24.08	1610	27.53	2560	27.37	2520	17.91	345	16.87	210
16	17.54	335	21.54	985	25.62	1890	17.58	234	16.70	159	17.70	194	20.97	890	24.41	1700	27.16	2460	27.20	2470	17.87	338	16.87	210
17	18.04	396	21.37	950	25.16	1760	17.45	219	17.37	210	17.70	194	21.08	910	27.04	2430	26.95	2400	26.99	2410	17.87	338	16.87	210
18	18.33	440	21.41	960	24.91	1700	17.37	210	17.33	206	17.70	194	21.50	1000	26.87	2380	26.70	2330	26.74	2340	17.87	338	16.87	210
19	19.29	590	21.45	945	24.49	1590	16.99	177	17.29	202	17.70	194	22.12	1130	26.54	2290	25.95	2120	26.37	2240	17.87	338	16.87	210
20	19.62	655	21.45	945	24.01	1460	16.91	172	17.20	186	17.70	194	22.91	1310	24.87	1820	25.62	2030	25.87	2100	17.87	338	16.87	210
21	20.12	755	21.45	945	23.83	1420	16.87	169	17.12	180	17.70	194	22.87	1300	24.04	1600	25.54	2010	25.58	2020	17.87	338	16.87	210
22	20.12	755	21.49	955	23.70	1380	16.75	162	17.12	180	17.70	194	25.45	1980	24.29	1670	25.54	2010	25.03	1860	17.12	238	16.87	210
23	21.04	950	21.45	945	23.62	1360	16.70	159	16.99	170	17.70	194	28.95	2960	24.37	1680	25.54	2010	24.87	1820	16.95	219	16.87	210
24	22.04	1190	21.45	945	23.29	1280	16.70	159	16.95	168	17.95	230	29.11	3010	24.54	1730	25.54	2010	24.87	1820	17.03	228	16.87	210
25	22.54	1310	21.58	975	23.08	1230	16.70	159	16.95	162	18.25	266	29.20	3030	24.79	1800	25.54	2010	24.49	1720	17.45	278	16.87	210
26	23.16	1460	21.70	1000	23.04	1230	16.70	159	16.91	160	18.79	341	28.53	2840	25.08	1880	25.54	2010	24.28	1660	17.62	302	16.87	210
27	23.70	1590	21.79	995	22.95	1200	16.70	159	16.79	153	18.95	381	27.99	2690	24.37	1690	25.20	1910	23.99	1590	17.87	338	16.87	210
28	24.37	1750	21.83	1000	22.75	1160	16.70	159	16.70	149	19.04	394	27.27	2490	24.79	1800	26.79	2360	23.74	1520	17.82	331	16.87	210
29	24.95	1890	21.50	935	22.66	1140	16.70	159	.....	.....	19.04	394	26.91	2390	25.20	1910	27.36	2520	23.66	1500	17.70	313	16.87	210
30	25.20	1950	21.37	910	22.45	1090	16.70	159	.....	.....	19.04	410	26.99	2410	25.49	1990	27.70	2610	23.28	1400	17.57	295	16.87	210
31	25.20	1950	.....	.....	22.29	1060	16.70	159	.....	.....	19.04	410	.....	.....	26.20	2190	.....	.....	22.66	1250	17.20	248	.....	.....

Monthly Discharge of aux Sables River at Massey for 1916-7

Drainage Area. 524 Square Miles

Month	Discharge in Second-feet			Discharge in Second-feet per Square Mile			Run-off
	Maximum	Minimum	Mean	Maximum	Minimum	Mean	Depth in Inches on Drainage Area
October (1916)	1,950	314	735	3.72	.60	1.40	1.61
November "	1,860	910	1,275	3.55	1.74	2.43	2.71
December "	2,360	890	1,433	4.50	1.70	2.73	3.15
January .. (1917)	1,040	159	423	1.98	.30	.81	.93
February.	210	149	167	.40	.28	.32	.33
March.....	410	145	224	.78	.28	.43	.50
April	3,030	410	1,367	5.78	.78	2.61	2.91
May.....	2,430	1,600	2,028	4.64	3.05	3.87	4.46
June.....	2,970	1,910	2,432	5.67	3.65	4.64	5.17
July.....	2,560	1,250	2,176	4.89	2.39	4.15	4.78
August.....	885	219	385	1.69	.42	.73	.84
September	248	194	219	.47	.37	.42	.47
The year	3,030	145	1,077	5.78	.28	2.06	27.90

Blanche River near Englehart

Location—At the highway bridge near the High Falls, 3½ miles north-west of the Town of Englehart, north half of lot 12, concession 3, Township of Evanturel, Temiskaming District.

Records Available—Discharge measurements, August, 1914, to October, 1916. Gauge heights from October 8, 1914, with occasional omissions.

Drainage Area—430 square miles.

Gauge—Vertical steep staff 0-12 feet, located on the southeast downstream side of first pier. The zero on the gauge (elev. 8.00) is referred to B.M. elev. 23.39, painted on a conspicuous rock on the right bank 75 feet below the bridge.

Channel—At a point 200 feet above the station, the river curves from the right and then flows straight, up to a point 700 feet below the station. Both banks are high, rocky, wooded, and will not overflow. The bed of the stream is composed of clay, practically permanent. The current is very slow, flowing through 2 channels at low stages and 3 channels during high water periods.

Discharge Measurements—Made from the highway bridge with a Price current meter.

Winter Flow—During the winter months measurements are made through the ice to determine the winter discharge. The relation of gauge height to discharge is seriously affected by ice.

Regulation—A temporary dam is built above the station during the summer months. This dam is used for storing water during the period when the river is used for log driving. The gauge heights at the section are therefore affected during the log driving periods.

Accuracy—Rating curve fairly well defined between gauge heights 10.50 feet and 12.00 feet.

Observer—W. D. Groom, Englehart.

Discharge Measurements of Blanche River near Englehart in 1916-7

Date	Hydrographer	Width in Feet	Area of Section in Sq. Feet	Mean Velocity in Feet per Sec.	Gauge Height in Feet	Discharge in Sec-Feet	Discharge in Second-feet per Square Mile
1916							
Oct. 4....	Murray, W. S..	91	614	.43	10.25	263	.....
Nov. 9....	" ..	110	870	1.15	13.00	1,002	.....
1917							
Jan. 23....	" ..	31	129	1.97	10.70	254(24)	.....
Feb. 27....	" ..	65	339	.58	10.29	197(25)	.....
April 24....	" ..	82	759	.79	12.02	600(26)	.....
May 22....	" ..	116	1,031	2.11	14.75	2,177	.....
June 4....	" ..	101	925	1.22	13.58	1.128	.....
July 23....	" ..	84	639	.67	11.42	432	.....
Aug. 27....	Newland	89	686	.53	11.00	360	.....
Oct. 25....	Roberts, E.....	101	781	.47	11.79	366	.....

(24) Ice measurement. Reading taken 300 feet below regular section.
(25) Ice measurement. Reading taken 300 feet below regular section.
(26) Floating ice may affect.

Daily Gauge Height and Discharge of Blanche River near Englehart for 1916-7

Drainage Area, 430 Square Miles

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge
	Feet	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*
1	10.25	210	.....	.....	10.62	247	10.83	274	.....	.....	.....	.....	.....	.....	17.08	4480	13.08	934	12.50	710	10.42	273	12.17	612
2	10.25	210	.....	.....	10.66	252	10.83	274	10.71	246	10.16	186	.....	.....	18.08	5480	13.16	971	12.16	609	10.42	273	12.08	587
3	10.25	210	.....	.....	10.66	252	10.83	274	10.66	240	.....	.....	.....	.....	18.00	5400	13.58	1205	12.16	609	.....	....	11.83	522
4	10.25	210	.....	.....	10.75	264	10.83	274	.....	.....	10.12	183	.....	.....	17.50	4900	13.50	1155	12.08	587	10.42	273	11.83	522
5	10.25	210	.....	.....	10.83	274	10.83	274	10.75	251	.....	.....	10.08	179	16.83	4230	13.41	1102	12.00	565	10.25	251	11.42	434
6	10.25	210	.....	.....	10.91	284	10.83	274	.....	.....	10.12	183	10.00	172	16.75	4150	13.33	1057	12.00	565	10.25	251	11.58	467
7	10.25	210	.....	.....	11.00	297	10.83	274	10.66	240	.....	.....	10.00	172	16.91	4310	13.08	934	11.91	542	10.17	241	11.42	434
8	10.25	210	.....	.....	11.00	297	10.83	274	.....	.....	9.92	165	.....	.....	17.50	4900	13.00	900	11.75	504	.....	....	11.33	417
9	10.27	214	13.00	900.	11.00	297	10.83	274	10.50	221	.....	.....	10.00	172	16.83	4230	13.41	1102	12.91	862	10.00	221	11.25	403
10	10.27	214	.....	.....	11.00	297	10.83	274	.....	.....	9.75	151	.....	.....	16.50	3900	13.41	1102	13.16	971	9.83	203	11.00	359
11	10.27	214	.....	.....	11.00	297	10.83	274	.....	.....	.....	.....	10.16	186	17.25	4650	13.08	934	13.33	1057	9.83	203	10.83	331
12	10.27	214	.....	.....	11.00	297	10.83	274	10.33	203	9.75	151	.....	.....	17.00	4400	12.91	862	13.58	1205	9.83	203	10.58	294
13	10.27	214	.....	.....	11.00	297	10.83	274	.....	.....	.....	.....	10.00	172	15.83	3230	12.91	862	13.91	1430	9.83	203	10.67	307
14	10.25	210	.....	.....	10.91	284	.....	.....	10.50	221	9.75	151	.....	.....	15.83	3230	13.33	1057	13.83	1373	9.83	203	10.58	294
15	10.25	210	.....	.....	10.83	274	.....	.....	.....	.....	.....	.....	10.00	172	15.66	3060	13.91	1430	13.83	1373	.....	....	10.58	294
16	10.25	210	.....	.....	10.75	264	.....	.....	10.41	211	9.75	151	.....	.....	15.41	2810	14.33	1757	13.58	1205	10.00	221	10.58	294
17	10.29	218	.....	.....	10.66	252	.....	.....	.....	.....	9.75	151	10.00	172	15.16	2560	14.08	1555	13.33	1057	10.00	221	10.58	294
18	10.29	218	.....	.....	10.66	252	.....	.....	10.41	211	9.75	151	10.10	181	14.91	2310	13.83	1373	13.00	900	9.92	212	10.41	271
19	10.29	218	.....	.....	10.66	252	.....	.....	.....	.....	.....	.....	10.16	186	15.00	2400	13.50	1155	12 67	769	10.08	231	10.50	283
20	10.29	218	.....	.....	10.66	252	.....	.....	10.50	221	9.75	151	10.66	240	15.33	2730	13.33	1057	12.42	685	.....	....	10.50	283
21	10.29	218	.....	.....	10.75	264	.....	.....	.....	.....	.....	.....	10.66	252	15.58	2980	.....	....	12.17	612	10.17	241	10.41	271
22	11.16	435	.....	.....	10.83	274	.....	.....	10.50	221	9.75	151	12.08	511	14.66	2060	13.00	900	12.00	565	.....	....	10.58	294
23	11.16	435	.....	.....	10.91	284	10.71	246	.....	.....	.....	.....	12.00	515	16.33	3730	12.83	831	11.92	544	10.42	273	10.58	294
24	11.16	435	.....	.....	11.00	297	.....	.....	10.58	231	9.84	158	12.00	539	16.33	3730	12.66	765	10.50	283	10.58	294	10.42	273
25	11.16	435	.....	.....	11.00	297	10.66	240	.....	.....	.....	.....	12.00	565	16.16	3560	11.75	504	10.42	273	.....	....	10.42	273
26	11.16	435	10.58	243	10.91	284	.....	.....	10.33	203	10.16	186	.....	.....	15.58	2980	10.41	271	10.50	283	10.83	331	10.42	273
27	11.16	435	10.58	243	10.91	284	10.75	251	.....	.....	.....	.....	12.41	682	15.25	2650	10.50	283	10.58	294	11.33	417	10.50	283
28	11.16	435	10.58	243	10.83	274	.....	.....	10.25	195	.....	.....	13.91	1430	14.75	2150	10.66	305	.....	....	11.83	522	10.50	283
29	11.16	435	10.62	247	10.83	274	10.75	251	.....	.....	.....	.....	15.33	2730	14.25	1690	11.16	387	10.42	273	11.83	522	10.50	283
30	11.16	435	10.62	247	10.83	274	.....	.....	.....	.....	.....	.....	16.50	3900	13.16	971	11.19	392	10.42	273	12.33	658	10.50	283
31	11.16	435	.....	.....	10.83	274	10.71	246	.....	.....	.....	.....	.....	.....	12.91	862	.....	....	10.42	273	12.33	658	.....	....

Monthly Discharge of Blanche River near Englehart for 1916-7

Drainage Area, 430 Square Miles

Month	Discharge in Second-feet			Discharge in Second-feet per Square Mile			Run-off
	Maximum	Minimum	Mean	Maximum	Minimum	Mean	Depth in Inches on Drainage Area
October...(1916)	435	210	285	1.01	.48	.66	.76
November "	900	243	354	2.09	.56	.82	.91
December "	297	247	276	.69	.57	.64	.74
January .. (1917)	274	240	266	.64	.56	.62	.71
February	251	195	222	.58	.45	.52	.54
March.....	186	151	162	.43	.35	.38	.44
April	3,900	172	656	9.07	.40	1.53	1.71
May.....	5,480	862	3,378	12.74	2.00	7.85	9.05
June.....	1,757	271	936	4.09	.63	2.18	2.43
July.....	1,430	273	708	3.33	.63	1.65	1.90
August.....	658	203	304	1.54	.47	.71	.82
September	612	271	350	1.42	.63	.81	.90
The year	5,480	151	658	12.74	.35	1.53	20.77

Frederickhouse River at Frederickhouse

Location—On the upstream side of the highway bridge crossing the river on the township line between the Townships of Fournier and Clute, District of Temiskaming.

Records Available—Discharge measurements and daily gauge heights to September 30, 1917, from July, 1915, have been taken at the railway crossing 1.8 miles north and downstream from the present point of observation and measurement.

Drainage Area—1,260 square miles.

Gauge—Standard enamelled gauge plates 0-12 feet on the upstream side of the first pier from the left bank. Zero of the gauge is at an assumed elevation of 98.00 feet referred to a B.M. elev. 115.18, the top of an iron cap projecting above the floor of the bridge west of the west pier.

Channel and Control—The current is slow, but even across the section, and through one channel, away from the bridge, where discharge measurements are made when possible. Otherwise measurements are made from the bridge that breaks the flow into several channels.

Discharge Measurements—Made by current meter from the bridge, ice, or boat.

Regulation—There is no artificial control of the waters of this river above the new section.

Observer—Allard Bourassa, Frederickhouse.

Discharge Measurements of Frederickhouse River at Frederickhouse in 1916-7

Date	Hydrographer	Width in Feet	Area of Section in Sq. Feet	Mean Velocity in Feet per Sec.	Gauge Height in Feet	Discharge in Sec-Feet	Discharge in Second-feet per Square Mile
1917							
Jan. 24....	Murray, W. S..	160	1,198	.40	12.66	485(9)	.....
May 23....	" ..	188	1,085	9.83	14.20	10,674(10)	.....
June 5....	" ..	195	2,191	3.04	14.08	6,673	.....
July 24....	" ..	151	1,404	1.82	11.50	2,550	.....
Aug. 30....	Newland	147	1,146	1.16	10.75	1,327	.....
" 30....	"	147	1,146	1.16	10.42	1,327	.....
Oct. 23....	Roberts, E.....	148	1,126	1.10	10.65	1,316	.....

(9) Ice measurements, taken two miles above regular section.
(10) Surface velocities.

Daily Gauge Height and Discharge of Frederickhouse River at Frederickhouse for 1916-7

Drainage Area, 1,260 Square Miles

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge
	Feet	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*
1	9.62	320	10.25	950	12.08	2800	13.91	6440	11.75	2400	10.16	660	9.91	410	14.00	7400	14.58	9780	12.08	3040	12.50	3660	10.58	1290
2	9.58	280	10.58	1290	12.00	2700	13.83	6180	11.75	2400	10.16	660	10.08	580	14.41	9080	14.58	9780	12.16	3150	12.33	3400	10.50	1200
3	9.58	280	10.87	1610	12.16	2890	13.83	6180	11.66	2290	10.16	660	10.16	660	14.08	7730	14.33	8750	12.16	3150	12.17	3170	10.50	1200
4	9.58	280	11.00	1750	12.00	2700	13.83	6180	11.58	2200	10.08	580	10.16	660	14.58	9780	14.16	8060	12.16	3150	11.92	2840	10.42	1120
5	9.58	280	11.00	1750	11.83	2500	13.75	5920	11.41	1990	10.08	580	10.16	660	14.75	10480	14.08	7730	12.08	3040	11.83	2740	10.33	1030
6	9.58	280	11.00	1750	11.75	2400	13.75	5920	11.29	1850	10.08	580	10.16	660	13.25	5150	13.83	6840	12.00	2940	11.67	2540	10.33	1030
7	9.58	280	11.08	1840	11.75	2400	13.58	5460	11.16	1710	10.00	500	10.16	660	13.08	4740	13.66	6280	11.91	2830	11.58	2440	10.33	1030
8	9.58	280	11.25	2040	11.66	2290	13.58	5460	11.08	1620	10.00	500	10.16	660	13.00	4550	13.50	5750	11.83	2740	11.42	2240	10.25	950
9	9.58	280	11.41	2230	11.66	2290	13.58	5460	11.00	1530	10.00	500	10.00	500	13.00	4550	13.41	5530	11.75	2640	11.25	2040	10.33	1030
10	9.58	280	11.50	2100	11.66	2290	13.50	5270	11.00	1530	9.91	410	9.91	410	13.25	5150	13.25	5150	11.66	2530	11.17	1940	10.42	1120
11	9.58	280	11.50	2100	11.83	2500	13.50	5270	10.87	1390	9.91	410	9.91	410	13.41	5530	13.08	4740	11.66	2530	11.00	1750	10.33	1030
12	9.58	280	11.33	1900	12.08	2800	13.41	5050	10.75	1260	9.91	410	9.91	410	13.33	5340	13.00	4550	11.66	2530	10.92	1660	10.33	1030
13	9.58	280	11.66	2290	12.33	3110	13.33	4860	10.66	1160	9.91	410	9.91	410	13.83	6840	13.08	4740	12.66	3920	10.92	1660	10.33	1030
14	9.58	280	11.75	2400	12.41	3220	13.25	4670	10.58	1080	9.91	410	9.91	410	13.83	6840	13.08	4740	12.50	3660	10.83	1560	10.25	950
15	9.58	280	11.83	2500	12.41	3220	13.21	4570	10.50	1000	9.87	370	9.96	460	13.75	6580	13.08	4740	12.25	3280	10.75	1480	10.25	950
16	9.60	300	11.91	2590	12.50	3350	13.16	4470	10.41	910	9.83	330	10.00	500	14.08	7730	13.16	4930	12.08	3040	10.67	1390	10.16	860
17	9.58	280	11.91	2590	12.50	3740	13.00	4170	10.41	910	9.83	330	10.00	500	14.41	9080	13.08	4740	12.00	2940	10.67	1390	10.16	860
18	9.58	280	11.83	2500	12.75	3870	13.00	4170	10.41	910	9.83	330	10.00	500	14.41	9080	12.91	4370	11.92	2840	10.58	1290	10.08	780
19	9.58	280	11.75	2400	12.75	4170	13.00	4170	10.33	830	9.83	330	10.08	580	14.66	10110	12.75	4080	11.83	2740	10.75	1480	10.08	780
20	9.58	280	11.66	2290	12.83	4170	12.91	4010	10.33	830	9.83	330	10.25	750	14.66	10110	12.75	4080	11.75	2640	10.83	1560	10.08	780
21	9.62	320	11.50	2100	13.00	4470	12.83	3870	10.33	830	9.83	330	10.58	1080	14.66	10110	12.66	3920	11.67	2540	10.75	1480	10.08	780
22	9.77	470	11.91	2590	13.00	4670	12.75	3740	10.33	830	9.83	330	10.75	1260	14.50	9450	12.58	3790	11.58	2440	10.67	1390	10.08	780
23	9.83	530	11.58	2200	13.16	4470	12.75	3740	10.25	750	9.83	330	10.91	1430	14.33	8750	12.50	3660	11.50	2340	10.58	1280	10.08	780
24	9.91	610	11.41	1990	13.25	4670	12.66	3600	10.25	750	9.83	330	11.25	1800	14.66	10110	12.50	3660	11.50	2340	10.58	1280	10.08	780
25	9.91	610	11.33	1900	13.75	5920	12.41	3220	10.25	750	9.83	330	11.83	2500	14.50	9450	12.41	3520	11.42	2240	10.67	1390	10.08	780
26	10.08	780	11.50	2100	14.08	7000	12.25	3000	10.25	750	9.91	410	12.91	4370	14.50	9450	12.33	3400	11.42	2240	10.67	1390	10.08	780
27	10.16	860	11.83	2500	14.16	7270	12.16	2890	10.25	750	9.91	410	13.33	5340	14.50	9450	12.25	3280	11.33	2140	10.83	1560	10.08	780
28	10.21	910	12.08	2800	14.08	7000	12.08	2800	10.25	750	9.91	410	13.33	5340	14.50	9450	12.16	3150	11.25	2040	10.83	1560	10.08	780
29	10.21	910	12.08	2800	14.16	7270	11.91	2590	.....	....	9.91	410	13.41	5530	14.50	9450	12.08	3040	11.17	1940	10.83	1560	10.08	780
30	10.25	950	12.08	2800	14.16	7270	11.83	2500	.....	....	9.83	330	14.25	8420	14.50	9450	12.08	3040	11.17	1940	10.75	1480	10.08	780
31	10.25	950	.....	....	14.16	7270	11.83	2500	.....	....	9.83	330	.....	....	14.50	9450	.....	....	11.08	1840	10.67	1390	.....	....

Monthly Discharge of Frederickhouse River at Frederickhouse for 1916-7

Drainage Area, 1,260 Square Miles

Month	Discharge in Second-feet			Discharge in Second-feet per Square Mile			Run-off
	Maximum	Minimum	Mean	Maximum	Minimum	Mean	Depth in Inches on Drainage Area
October (1916)	950	280	437	.75	.22	.35	.40
November "	2,800	950	2,155	2.22	.75	1.71	1.91
December "	7,270	2,290	4,090	5.76	1.82	3.25	3.75
January .. (1917)	6,440	2,500	4,468	5.11	1.98	3.55	4.09
February	2,400	750	1,284	1.90	.60	1.02	1.06
March	660	330	428	.52	.26	.34	.39
April.....	8,420	410	1,595	6.68	.32	1.27	1.42
May	10,480	4,550	8,085	8.32	3.61	6.42	7.40
June.....	9,780	3,040	5,127	7.76	2.41	4.07	4.54
July.....	3,920	1,840	2,850	3.11	1.46	2.26	2.61
August	3,660	1,290	1,871	2.90	1.02	1.49	1.72
September	1,290	780	928	1.02	.62	.74	.83
The year	10,480	280	2,791	8.32	.22	2.22	30.07

Kagawong River at Kagawong

Location—150 feet below Kagawong Falls in the Village of Kagawong, Township of Billings, Manitoulin Island.

Records Available—Discharge measurements from July, 1915. Daily gauge heights from July 11, 1915, to December 31, 1917.

Drainage Area—94 square miles.

Gauge—Vertical steel staff with enamelled face, graduated in feet and inches, connected to a 2 x 4 scantling and attached to a large rock in stream 20 feet below the gauging station. Zero of the gauge (elev. 10.00 feet) is referred to a bench mark (elev. 15.86 feet) painted on a rock on right bank at the gauging station. The initial point for soundings is located on an iron post on the left bank opposite the bench mark.

Channel—Straight for about 100 feet above and below the gauging station. Both banks are high and wooded, and are not liable to overflow. The bed of the stream is composed of rock and clay, slightly shifting, one channel existing at all stages.

Discharge Measurements—Made by wading with a small Price current meter.

Regulation—The flow is controlled by the dam 200 feet above the falls.

Accuracy—A mill operates just above the section, but gauge readings are taken at such times as should show a fairly accurate mean of elevation.

Observer—Cora Hunt, Kagawong.

Discharge Measurements of Kagawong River at Kagawong in 1916-7

Date	Hydrographer	Width in Feet	Area of Section in Sq. Feet	Mean Velocity in Feet per Sec.	Gauge Height in Feet	Discharge in Sec-Feet	Discharge in Second-feet per Square Mile
1916							
Oct. 17	Murray, W. S..	22	31	1.61	11.25	49	.....
1917							
July 20	" ..	22	30	4.71	11.60	143	.....
Aug. 19	Newland.....	20	21	2.74	11.25	56	.....
							.....

Daily Gauge Height and Discharge of Kagawong River at Kagawong for 1916-7

Drainage Area, 94 Square Miles

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge
	Feet	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*
1	10.91	27	10.91	29	11.58	67	11.58	67	11.66	77	11.33	39	11.66	126	12.00	187	11.50	97	11.75	142	11.58	111	11.17	54
2	11.00	32	10.87	26	11.58	67	11.58	67	11.91	117	11.50	57	11.75	142	12.08	201	11.58	111	11.75	142	11.25	63	11.16	53
3	10.95	29	10.91	29	11.58	67	11.75	90	11.91	117	11.54	62	11.75	142	12.00	187	11.66	126	11.83	156	11.25	63	11.16	53
4	10.83	22	10.91	29	11.58	67	11.50	57	11.91	117	11.75	90	11.83	156	12.00	187	11.66	126	11.83	156	11.25	63	11.16	53
5	10.83	22	10.83	23	11.58	67	11.50	57	11.66	77	11.75	90	11.83	156	12.00	187	11.66	126	11.75	142	11.25	63	11.16	53
6	10.91	27	10.83	23	11.58	67	11.50	57	11.58	67	11.58	67	11.83	156	12.00	187	11.66	126	11.66	126	11.25	63	11.16	53
7	10.91	27	10.83	23	11.66	77	11.50	57	11.58	67	11.41	47	11.75	142	12.00	187	11.66	126	11.66	126	11.25	63	11.16	53
8	10.91	27	10.91	29	11.66	77	11.58	67	11.58	67	11.50	57	11.75	142	12.00	187	11.66	126	11.66	126	11.25	63	11.16	53
9	10.91	27	10.91	29	11.75	90	11.75	90	11.75	90	11.58	67	11.83	156	11.91	171	11.66	126	11.66	126	11.25	63	11.16	53
10	10.91	27	10.83	23	11.83	102	11.91	117	11.83	102	11.41	47	11.83	156	12.00	187	11.75	142	11.66	126	11.25	63	11.16	53
11	10.91	27	10.83	23	11.91	117	12.16	162	12.16	162	11.50	57	11.83	156	12.00	187	11.75	142	11.66	126	11.25	63	11.16	53
12	10.91	27	10.91	29	11.83	102	11.91	117	12.33	192	11.50	57	11.91	171	12.00	187	11.75	142	11.66	126	11.25	63	11.16	53
13	10.91	27	10.91	29	11.75	90	11.83	102	12.33	192	11.41	47	11.91	171	12.00	187	11.75	142	11.66	126	11.25	63	11.25	63
14	10.87	24	11.00	36	11.75	90	11.58	67	11.83	102	11.41	47	11.83	156	12.00	187	11.75	142	11.66	126	11.25	63	11.25	63
15	10.83	22	11.16	53	11.83	102	11.58	67	11.66	77	11.41	47	11.83	156	12.00	187	11.75	142	11.67	128	11.25	63	11.25	63
16	10.91	27	11.25	63	11.91	117	11.75	90	11.66	77	11.41	47	11.83	156	12.00	187	11.75	142	11.67	128	11.25	63	11.16	53
17	10.91	27	11.25	63	11.91	117	11.75	90	11.58	67	11.50	57	11.91	171	12.00	187	11.75	142	11.67	128	11.25	63	11.25	63
18	10.91	27	11.33	73	12.00	133	11.58	67	11.58	67	11.50	57	11.91	171	12.00	187	11.75	142	11.58	111	11.25	63	11.16	53
19	10.91	27	11.33	73	12.16	162	11.75	90	11.58	67	11.83	102	11.83	156	11.75	142	11.83	156	11.50	97	11.25	63	11.16	53
20	10.91	27	11.46	91	12.00	133	11.58	67	11.58	67	11.50	57	11.87	164	11.50	97	11.83	156	11.50	97	11.25	63	11.16	53
21	10.91	27	11.41	84	11.75	90	11.75	90	11.54	62	11.58	67	11.91	171	11.50	97	11.83	156	11.50	97	11.25	63	11.16	53
22	10.83	22	11.50	97	11.75	90	12.50	223	11.58	67	11.58	67	11.91	171	11.50	97	11.83	156	11.50	97	11.25	63	11.16	53
23	10.91	27	11.50	97	11.75	90	12.08	147	11.50	57	11.58	67	11.91	171	11.50	97	11.83	156	11.58	111	11.25	63	11.16	53
24	10.91	27	11.50	97	12.08	147	11.75	90	11.66	77	11.66	77	12.00	187	11.50	97	11.75	142	11.50	97	11.25	63	11.16	53
25	10.91	27	11.50	97	11.96	126	11.75	90	11.75	90	11.58	67	12.00	187	11.50	97	11.75	142	11.50	97	11.25	63	11.08	44
26	10.91	27	11.50	97	12.25	178	11.58	67	11.66	77	11.58	67	12.00	187	11.50	97	11.75	142	11.50	97	11.17	54	11.08	44
27	10.91	27	11.50	97	11.75	90	11.58	67	11.66	77	11.83	102	12.00	187	11.50	97	11.83	156	11.50	97	11.17	54	11.08	44
28	10.91	27	11.50	97	12.00	133	11.66	77	11.50	57	11.66	77	12.00	187	11.50	97	11.75	142	11.50	97	11.17	54	11.08	44
29	10.83	22	11.58	111	11.91	117	11.58	67	.....	.....	11.75	90	12.00	187	11.50	97	11.66	126	11.50	97	11.17	54	11.08	44
30	10.91	27	11.58	111	12.00	133	11.58	67	.....	.....	11.75	90	12.00	187	11.50	97	11.66	126	11 42	85	11.17	54	11.08	44
31	10.91	27	.....	.....	11.75	90	11.50	57	.....	.....	11.75	90	.....	.....	11.50	97	.....	.....	11.42	85	11.17	54	.....	....

Monthly Discharge of Kagawong River at Kagawong for 1916-7

Drainage Area, 94 Square Miles

Month	Discharge in Second-feet			Discharge in Second-feet per Square Mile			Run-off
	Maximum	Minimum	Mean	Maximum	Minimum	Mean	Depth in Inches on Drainage Area
October ..(1916).	32	22	26	.33	.23	.28	.32
November "	111	23	59	1.18	.24	.63	.70
December "	178	67	103	1.89	.71	1.10	1.27
January ..(1917).	223	57	87	2.37	.61	.93	1.07
February	192	57	90	2.04	.61	.96	1.00
March.....	102	39	66	1.08	.41	.70	.81
April	187	126	164	1.99	1.34	1.74	1.94
May.....	201	97	151	2.14	1.03	1.61	1.86
June	156	97	137	1.66	1.03	1.46	1.63
July.....	156	85	117	1.66	.90	1.24	1.43
August	111	54	63	1.18	.57	.67	.77
September.....	63	44	53	.67	.47	.56	.62
The year	201	22	93	2.14	.23	.99	13.44

Mattagami River at Smooth Rock Falls

Location—Lot 23, Concession XI, Township of Kendry, Temiskaming District. About one mile below the plant of the Mattagami Pulp and Paper Co. at Smooth Rock Falls.

Records Available—The Mattagami Pulp and Paper Co. take readings of the water below their plant, from which it is expected estimates of flow may be made when a curve is defined.

Drainage Area—3,970 sq. miles.

Gauge—A chain gauge is installed reading zero with the elevation of the water at 707.00, referred to a B.M. elev. 725.04. The B.M. is 10 feet S.W. of the initial point for soundings the head of a nail driven in a blazed and painted tree.

Channel and Control—A well-defined, evenly distributed current exists at all times. There is but one channel at all stages. Extreme high water is not likely to go over the river banks at this spot. The control point is not well defined, or as yet has not been ascertained.

Regulation—Extensive storage works have been constructed for the purposes of regulating the headwaters of the river for the benefit of power plants.

Discharge Measurements—Made by current meter from a boat or the ice.

Co-operation—The engineers and officers of the Mattagami Pulp and Paper Co. co-operated with the Commission's engineers in obtaining discharge measurements and have taken elevations of water level below the plant from which it is expected estimates of flow antedating the making of discharge measurements will be possible.

Winter Flow—The amount of ice effect on discharge is not yet determined, but will be considerable.

Mississagi River at Iron Bridge

Location—At highway bridge in the village of Iron Bridge, south half of lot 3, concession 2, Township of Gladstone, District of Algoma.

Records Available—Discharge measurements from September, 1915. Daily gauge heights from November 16, 1915.

Drainage Area—3,565 square miles.

Gauge—Vertical steel staff with enamelled face graduated in feet and inches, 0 to 6 foot section placed on pile on left shore 350 feet down stream from bridge, 6 to 12 foot section placed on down stream side of right abutment of bridge. Zero of the gauge (elev. 30.00) referred to bench mark (elev. 55.50 feet) on top of right abutment down stream side.

Channel—Straight for about 300 feet above and about 1 mile below the gauging station. The bed of the stream consists of clay and sand, slightly shifting.

Discharge Measurements—Made from highway bridge with small Price current meter.

Control—About eleven miles below the gauging station there is a small falls and rapids known as the Mississagi rapids. Log jams sometimes occur on these rapids during low water period, which may cause back water at the gauging station.

Winter Flow—During the winter months measurements are made through the ice to determine the winter flow. The relation of gauge height to discharge is seriously affected by ice.

Observer—Jas. Tulloch, Iron Bridge.

Discharge Measurements of Mississagi River at Iron Bridge in 1916-7

Date	Hydrographer	Width in Feet	Area of Section in Sq. Feet	Mean Velocity in Feet per Sec.	Gauge Height in Feet	Discharge in Sec-Feet	Discharge in Second-feet per Square Mile
1916							
Oct. 19....	Murray, W. S...	165	2,464	1.02	32.39	2,516	.....
Nov. 17....	"	177	3,054	1.98	35.79	6,045	.....
1917							
Jan. 30....	"	155	2,414	.37	33.33	898(9)	.....
Feb. 20....	"	225	2,238	.58	32.54	1,297(10)	.....
Mar. 13....	"	225	2,277	.58	32.75	1,320(11)	.....
June 20....	"	187	3,716	3.06	39.33	11,402	.....
July 18....	"	182	3,489	2.69	38.00	9,374	.....
Aug. 22....	Newland, S. G...	165	2,433	1.02	31.92	2,509	.....
Sept. 15....	Roberts, E.	162	2,454	.61	31.42	1,495	.....
Oct. 16....	"	158	2,340	.50	30.75	1,176	.....

(9) Ice measurement, conditions bad.
(10) Ice measurement taken 2½ miles below regular section.
(11) Ice measurement taken 2½ miles below regular section.

Daily Gauge Height and Discharge of Mississagi River at Iron Bridge for 1916-7

Drainage Area, 3,565 Square Miles

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge
	Feet	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*
1	32.33	2580	37.83	8940	34.75	4480	36.58	5530	33.33	1990	32.58	1230	33.66	2100	39.66	12030	39.66	12030	36.33	6810	33.75	3930	31.50	1780
2	32.29	2540	38.08	9330	34.50	4180	36.33	5220	33.25	1920	32.58	1220	33.66	2100	40.00	12680	40.00	12680	36.25	6700	33.67	3850	31.54	1820
3	32.16	2410	38.08	9330	34.41	4040	36.00	4820	33.16	1830	32.58	1210	34.00	2410	41.16	14880	40.50	13630	36.16	6590	33.58	3760	31.54	1820
4	32.00	2250	38.00	9200	34.33	3910	35.83	4620	33.08	1760	32.58	1200	34.00	2410	40.58	13780	43.00	18380	36.08	6480	33.50	3680	31.50	1780
5	32.00	2250	37.83	8940	34.33	3860	35.66	4420	33.00	1690	32.58	1200	34.00	2410	40.16	12980	43.83	19960	36.00	6380	33.42	3600	31.46	1740
6	31.92	2170	37.58	8560	34.25	3730	35.41	4140	32.91	1610	32.58	1190	34.08	2480	39.75	12200	43.83	19960	35.91	6270	33.33	3510	31.42	1710
7	31.84	2090	37.16	7930	34.41	3840	35.25	3950	32.83	1540	32.58	1180	34.08	2480	39.58	11880	43.16	18680	35.83	6180	33.25	3430	31.38	1670
8	31.75	2000	37.16	7930	34.75	4130	35.16	3830	32.75	1460	32.58	1170	34.08	2480	39.50	11730	42.58	17580	35.75	6080	33.17	3350	31.33	1630
9	31.67	1920	37.16	7930	36.66	6150	35.08	3720	32.66	1380	32.58	1160	34.00	2410	39.50	11730	42.00	16480	35.67	5980	33.08	3260	31.29	1590
10	31.59	1840	37.00	7710	36.75	6200	34.91	3520	32.58	1310	32.62	1190	33.83	2260	39.58	11880	41.50	15530	35.58	5880	32.92	3100	31.25	1560
11	31.59	1840	36.91	7580	36.75	6140	34.75	3330	32.58	1310	32.66	1210	33.75	2180	39.83	12360	41.16	14880	35.50	5780	32.75	2930	31.21	1520
12	31.67	1920	36.75	7360	36.83	6180	34.58	3160	32.58	1310	32.71	1250	33.66	2100	40.16	12980	41.16	14880	35.42	5680	32.67	2850	31.17	1480
13	31.84	2090	36.66	7210	36.83	6180	34.50	3080	32.58	1310	32.75	1280	33.58	2030	38.00	9200	40.83	14260	35.33	5580	32.58	2760	31.13	1450
14	31.92	2170	36.50	6980	36.90	6260	34.33	2910	32.58	1310	32.75	1280	33.41	1880	39.50	11730	40.66	13930	35.25	5500	32.50	2680	31.08	1400
15	31.96	2210	36.41	6840	37.03	6420	34.16	2740	32.58	1310	32.75	1280	33.16	1650	39.66	12030	40.50	13630	35.17	5410	32.42	2610	31.08	1400
16	32.16	2410	36.25	6600	37.15	6580	34.08	2660	32.58	1310	32.79	1320	33.00	1510	40.00	12680	40.25	13160	35.08	5310	32.40	2590	31.00	1330
17	32.58	2830	36.08	6360	37.27	6730	34.00	2590	32.58	1310	32.83	1360	32.83	1360	39.83	12360	40.00	12680	35.00	5220	32.33	2530	30.96	1290
18	32.58	2830	35.83	6060	37.39	6890	33.91	2510	32.58	1310	32.91	1430	32.83	1360	39.58	11880	39.75	12200	34.92	5130	32.33	2530	30.92	1260
19	32.66	2910	35.58	5760	37.50	7030	33.83	2440	32.56	1290	33.00	1510	33.16	1650	39.16	11420	39.50	11730	34.83	5030	32.25	2460	30.88	1220
20	32.83	3080	35.33	5470	37.62	7190	33.75	2360	32.54	1280	33.04	1550	33.50	1960	39.16	11120	39.16	11120	34.75	4940	32.17	2380	30.83	1180
21	34.00	4260	35.00	5110	37.75	7360	33.66	2280	32.58	1300	33.08	1580	34.25	2640	39.16	11120	38.83	10540	34.67	4860	32.08	2300	30.75	1100
22	34.33	4590	34.91	5010	37.86	7510	33.58	2210	32.58	1290	33.16	1650	35.00	3380	39.16	11120	38.41	9860	34.58	4760	32.00	2230	30.75	1100
23	34.58	4840	34.83	4920	37.97	7630	33.58	2210	32.58	1280	33.25	1740	35.08	3460	39.16	11120	38.41	9860	34.50	4680	31.92	2160	30.73	1090
24	36.33	6600	34.83	4920	38.08	7740	33.54	2180	32.58	1280	33.33	1810	36.16	5180	39.16	11120	37.00	7710	34.42	4600	31.88	2120	30.71	1070
25	37.08	7360	35.00	5060	37.91	7460	33.50	2140	32.58	1270	33.41	1880	37.33	7330	39.16	11120	36.83	7470	34.33	4510	31.83	2080	30.69	1050
26	37.08	7360	35.33	5360	37.66	7080	33.50	2140	32.58	1260	33.50	1960	38.00	9200	39.16	11120	36.75	7360	34.25	4430	31.50	1780	30.67	1030
27	37.08	7360	35.58	5580	37.50	6840	33.41	2060	32.58	1250	33.58	2030	37.50	8440	39.25	11280	36.66	7240	34.17	4350	31.50	1780	30.67	1030
28	37.08	7360	35.83	5820	37.33	6580	33.37	2020	32.58	1240	33.58	2030	37.66	8680	39.25	11280	36.58	7130	34.08	4260	31.50	1780	30.67	1030
29	37.08	7360	35.66	5560	37.08	6220	33.33	1990	.....	.....	33.58	2030	38.08	9330	39.25	11280	36.50	7030	34.00	4180	31.48	1760	30.67	1030
30	37.25	7530	35.16	4960	36.75	5790	33.33	1990	.....	.....	33.58	2030	38.33	9730	39.41	11570	36.41	6910	33.92	4100	31.50	1780	30.71	1070
31	37.08	7360	.....	.....	.....	5760	33.33	1990	.....	.....	33.62	2070	.....	.....	39.50	11730	.....	.....	33.83	4010	31.50	1780	.....	.....

Monthly Discharge of Mississagi River at Iron Bridge for 1916-7

Drainage Area, 3,565 Square Miles.

Month	Discharge in Second-feet			Discharge in Second-feet per Square Mile			Run-off
	Maximum	Minimum	Mean	Maximum	Minimum	Mean	Depth in Inches on Drainage Area
October (1916)	7,530	1,840	4,641	2.11	.52	1.07	1.23
November "	9,330	4,920	6,811	2.62	1.38	1.91	2.13
December "	7,740	3,730	6,003	2.17	1.05	1.68	1.94
January (1917)	5,530	1,990	3,057	1.55	.56	.86	.99
February	1,990	1,240	1,418	.56	.35	.40	.42
March	2,070	1,160	1,491	.58	.33	.42	.48
April	9,730	1,360	3,620	2.73	.38	1.02	1.14
May	14,880	9,200	11,851	4.17	2.58	3.32	3.83
June	19,960	6,910	12,616	5.60	1.94	3.54	3.95
July	6,810	4,010	5,345	1.91	1.12	1.50	1.73
August	3,930	1,760	2,688	1.10	.49	.75	.86
September	1,820	1,030	1,374	.51	.29	.39	.44
The year	19,960	1,030	5,025	5.60	.29	1.41	19.14

South River near Powassan

Location—At "Gough's" highway bridge on the Nipissing village road 2.5 miles northwest of Powassan station and at the farm owned by Owen Gough between lots 20 and 21 and 14th and 15th concessions in the Township of Himsworth in the District of Nipissing.

Records Available—Discharge measurements from July 6, 1917, and before then at "Healey's" bridge. Daily gauge heights from March 11, 1914.

Drainage Area—294 square miles.

Gauge—Standard enamelled gauge plates 0-12 feet on the northwest corner of the left abutment. Elevation of the zero of the gauge 23.00 feet is referred to a B.M. elevation assumed 56.15 feet painted on the top of a corner of barn foundation 350 feet from the section.

Channel—Straight for about 200 feet above and 150 feet below the metering section. With high water conditions both banks are liable to overflow. The bed is largely composed of soft black muck, likely to shift under high velocities.

Discharge Measurements—Made with current meter. They are made from the bridge when velocities are high enough for good results and at other times from a boat at a section 100 feet below the bridge.

Winter Flow—Measurements made through ice in the winter. Ordinary relation between gauge heights and discharge are seriously disturbed by ice conditions, and measurements are made in the winter to determine this effect.

Accuracy—A fairly well defined rating curve has been established.

Observer—Owen Gough, Powassan.

Discharge Measurements of South River near Powassan in 1916-7

Date	Hydrographer	Width in Feet	Area of Section in Sq. Feet	Mean Velocity in Feet per Sec.	Gauge Height in Feet	Discharge in Sec-Feet	Discharge in Second-feet per Square Mile
1916							
Dec. 1	Murray, W. S....	115	827	1.15	29.08	956(47)	.....
1917							
Feb. 8	"	68	148	1.13	25.00	168(48)	.....
Mar. 9	"	68	128	1.00	24.66	129(49)	.....
April 13	"	125	741	1.62	28.16	764(50)	.....
May 2	"	120	1,185	1.51	30.83	1,788	.....
June 25	"	107	511	.84	25.58	432	.....
July 6	"	101	605	.55	25.75	337(53)	.....
Aug. 7	Newland, S. G...	75	547	.54	25.33	297	.....
Oct. 13	Roberts, E.....	77	545	.45	25.23	245	.....

(47) Ice on river but not at section.
(48) Ice measurement.
(49) Ice measurement.
(50) Ice on river below section.
(53) Taken at new section.

Daily Gauge Height and Discharge of South River near Powassan for 1916-7

Drainage Area, 294 Square Miles

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge
	Feet	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*
1	25.54	363	27.16	710	29.03	1100	26.00	313	24.83	136	24.58	107	31.08	1250	29.91	1480	27.16	710	27.03	675	25.62	337	24.58	168
2	25.21	300	27.12	700	28.58	970	25.87	289	24.75	126	24.54	102	31.54	1380	30.78	1720	27.29	750	26.66	580	25.38	290	24.58	168
3	24.91	250	27.00	665	28.50	945	25.75	267	24.75	126	24.50	98	31.79	1450	30.62	1680	27.33	760	26.25	473	25.29	274	24.50	158
4	24.79	230	26.83	620	28.03	815	25.83	281	24.75	126	24.50	98	32.03	1520	29.95	1490	27.33	760	25.96	407	25.21	261	24.50	158
5	24.62	203	26.66	580	28.12	840	25.83	281	24.75	126	24.50	98	32.33	1600	29.41	1340	27.58	830	25.75	363	25.17	254	24.50	158
6	24.50	185	26.54	545	29.00	1090	25.75	267	24.66	116	24.41	89	31.50	1370	29.04	1240	27.62	840	25.71	355	25.25	268	24.58	168
7	24.46	179	26.41	515	28.33	900	25.75	267	24.71	121	24.46	94	30.50	1090	28.71	1150	27.29	750	25.62	337	25.29	274	24.50	158
8	24.41	172	26.33	492	28.33	900	25.66	253	24.96	153	24.50	98	30.62	1120	28.46	1080	27.25	735	27.37	770	25.21	261	24.50	158
9	24.33	161	27.19	720	29.12	1120	25.66	253	24.96	153	24.66	116	29.12	700	28.21	1010	27.58	830	28.75	1160	25.17	254	24.50	158
10	24.33	161	28.21	980	29.41	1200	25.54	233	24.87	141	24.66	116	29.16	825	27.95	935	27.29	750	29.33	1320	25.08	240	24.50	158
11	24.29	155	27.95	905	29.79	1310	25.50	227	24.66	116	24.62	111	28.91	865	27.62	840	27.00	665	31.16	1830	25.08	240	24.46	153
12	24.25	150	27.54	790	29.87	1330	25.41	214	24.37	85	24.62	111	28.78	940	27.50	805	26.79	610	30.16	1550	24.92	215	24.42	148
13	24.33	161	27.21	700	29.91	1340	25.37	208	24.25	74	24.58	107	28.29	860	27.46	795	26.54	545	29.79	1450	23.92	90	24.37	141
14	25.03	269	26.83	595	30.08	1390	25.33	202	24.25	74	24.58	107	28.12	870	27.25	735	26.83	620	29.21	1290	25.67	347	24.29	131
15	25.25	307	26.62	515	29.87	1330	25.25	191	24.37	85	24.58	107	28.00	890	27.04	680	27.08	690	29.54	1380	26.92	645	24.25	126
16	25.33	322	26.53	493	29.54	1240	25.16	179	24.41	89	24.58	107	27.71	865	26.96	655	26.79	610	29.08	1250	26.83	620	24.25	126
17	25.58	371	26.29	436	29.37	1190	25.16	179	24.46	94	24.66	116	27.87	910	26.87	630	26.50	535	28.21	1010	26.38	505	24.25	126
18	26.00	457	26.25	427	29.08	1110	25.16	179	24.50	98	24.66	116	28.91	920	26.58	555	26.16	452	28.54	1100	26.00	416	24.16	115
19	25.91	438	26.12	398	28.54	960	25.08	168	24.50	98	24.66	116	30.37	1610	26.25	473	26.00	416	30.42	1620	25.75	363	24.16	115
20	26.95	685	26.08	369	28.21	865	25.00	158	24.58	107	24.66	116	32.58	2230	26.37	505	25.95	405	29.29	1310	26.00	416	24.16	115
21	27.75	905	25.87	327	27.95	795	24.91	146	24.58	107	24.66	116	34.04	2640	26.33	492	25.91	396	28.67	1130	25.75	363	24.20	120
22	28.41	1120	25.79	311	27.33	620	25.00	158	24.58	107	24.75	126	34.20	2680	26.33	492	25.91	396	27.92	925	25.42	298	24.20	120
23	28.08	1010	25.66	287	27.25	600	25.00	158	24.66	116	24.79	131	33.29	2430	27.99	945	25.83	379	27.25	735	25.21	261	24.16	115
24	27.79	915	26.03	359	27.04	545	25.00	158	24.58	107	25.87	246	32.49	2200	28.99	945	25.79	371	27.08	690	25.17	254	24.16	115
25	27.62	865	26.16	365	26.87	505	25.00	158	24.58	107	27.03	423	31.91	2040	28.75	1160	25.62	337	26.83	620	25.29	274	24.16	115
26	27.87	940	26.21	375	26.71	463	25.00	158	24.58	107	27.83	555	31.66	1970	28.33	1040	25.50	313	26.54	545	25.50	313	24.16	115
27	28.00	980	26.16	365	26.75	473	24.87	141	23.58	107	30.99	1360	31.58	1950	27.91	920	25.54	321	26.46	525	25.29	274	24.16	115
28	27.96	970	26.66	475	26.62	443	24.75	126	24.58	107	32.50	1720	30.95	1770	27.62	840	25.46	295	26.21	463	25.56	325	24.20	120
29	27.71	895	27.66	740	26.46	407	24.75	126	.....	.....	31.33	1320	30.50	1650	27.41	780	25.45	294	25.92	398	25.54	321	24.37	141
30	27.33	785	29.37	1190	26.21	355	24.75	126	.....	.....	30.46	1080	30.00	1510	27.25	735	27.04	680	25.92	398	25.38	290	24.87	208
31	27.29	775	.....	.....	26.08	329	24.75	126	.....	.....	30.33	1040	.....	....	27.16	710	.....	.....	25.67	371	25.12	246	.....	....

Monthly Discharge of South River near Powassan for 1916-7

Drainage Area, 294 Square Miles

Month	Discharge in Second-feet			Discharge in Second-feet per Square Mile			Run-off
	Maximum	Minimum	Mean	Maximum	Minimum	Mean	Depth in Inches on Drainage Area
October... (1916)	1,120	150	506	3.81	.51	1.72	1.98
November. "	1.190	287	565	4.05	.98	1.92	2.14
December "	1,390	329	886	4.72	1.12	3.01	3.47
January .. (1917)	313	126	200	1.06	.43	.68	.78
February.....	153	74	111	.52	.25	.38	.40
March.....	1.720	89	331	5.84	.30	1.13	1.30
April.....	2,680	700	1.470	9.12	2.38	5.00	5.58
May.....	1.720	473	931	5.84	1.61	3.17	3.65
June.....	840	294	568	2.86	1.00	1.93	2.15
July.....	1,830	337	872	6.22	1.15	2.97	3.42
August.....	645	90	316	2.19	.31	1.07	1.23
September.....	208	115	140	.71	.39	.48	.54
The year.....	2.680	74	577	9.12	.25	1.96	26.63

Spanish River at Webbwood

Location—On the highway bridge about one and a half miles east of Webbwood station on the Sault branch of the C.P.R. and eight miles below Espanola Mills.

Records Available—Gauge readings daily from February 1, 1917. Discharge measurements monthly from January, 1917.

Drainage Area—4,340 square miles.

Gauge—Vertical steel staff gauge 0-9 feet on third pier from north abutment and 9-12 feet on fourth pier.

Channel—The approach to the bridge is straight for 300 feet and below the bridge for one-half mile.

Discharge Measurements—During the open water season the measurements are made from the bridge and during the winter seasons the measurements are made from the ice about half a mile below the bridge.

Winter Flow—The relation between gauge readings and discharge is seriously disturbed during the winter months, but the ice effect is shown to be regular in direction.

Regulation—The Spanish River Pulp and Paper Co. operate a plant at Espanola, eight miles above the section, which is partly shut down on Sundays, accounting for the fluctuation in gauge heights at the week ends. This company also has storage dams at various locations on the headwaters of this river for conserving the flow for both lumbering and power purposes.

Accuracy—The curve is based on 15 discharge measurements, the majority being made during the current year.

Observer—D. J. Stewart, Webbwood.

Discharge Measurements of Spanish River at Webbwood in 1916-7

Date	Hydrographer	Width in Feet	Area of Section in Sq. Feet	Mean Velocity in Feet per Sec.	Gauge Height in Feet	Discharge in Sec-Feet	Discharge in Second-feet per Square Mile
1916							
Nov. 18....	Murray, W. S..	206	3,440	1.31	38.88	4,792	.....
1917	" ..						
Jan. 11....	" ..	190	3,119	.95	37.73	2,870	.....
" 29....	" ..	345	2,612	1.02	37.56	2,676(7)	.....
Feb. 16....	" ..	335	2,692	1.00	37.54	2,701(8)	.....
Mar. 14....	" ..	155	2,895	.90	38.08	2,617	.....
Apr. 17....	" ..	202	3,708	1.84	40.20	6,829(10)	.....
May 15....	" ..	238	4,340	2.37	42.33	10,304	.....
June 21....	" ..	247	4,846	3.20	44.40	15,487	.....
July 19....	" ..	220	4,045	2.25	41.67	9,105	.....
Aug. 18....	Newland, S. G...	203	3,384	1.25	38.92	4,223	.....
Sept. 17....	Roberts, E.....	197	3,238	.77	37.75	2,494	.....
Oct. 17....	"	162	3,060	.78	37.44	2,395	.....

(7) Ice measurement taken 600 feet below regular section.
(8) Ice measurement taken 600 feet below regular section.
(10) Floating ice on control.

Daily Gauge Height and Discharge of Spanish River at Webbwood for 1916-7

Drainage Area, 4,340 Square Miles

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	Gauge Ht	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge
	Feet	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*
1	37.16	1750	40.33	6630	38.51	3620	39.94	5940	37.83	2220	38.08	2570	38.33	3340	42.83	11620	45.75	19200	42.58	11070	40.08	6180	38.42	3480
2	37.55	2250	40.18	6360	38.35	3380	39.79	5670	37.91	2060	38.08	2570	39.75	5600	43.33	12780	45.58	18720	42.16	10190	40.25	6490	38.25	3230
3	37.51	2190	40.11	6230	37.69	2440	39.79	5670	37.75	1980	37.75	2120	40.00	6040	43.58	13380	45.41	18250	41.92	9680	39.75	5600	37.58	2290
4	37.47	2140	40.14	6290	37.98	2850	39.56	5270	36.50	510	36.42	620	41.16	8150	42.08	10020	46.58	21520	41.50	8820	39.50	5170	38.25	3230
5	37.51	2190	39.58	5300	38.25	3230	39.56	5270	37.33	1360	37.33	1600	41.91	9660	43.75	13800	47.33	23620	41.00	7850	38.42	3480	38.50	3600
6	37.55	2250	39.88	5830	38.35	3380	39.56	5270	37.91	2060	37.83	2220	42.00	9850	42.50	10900	47.33	23620	40.58	7080	39.67	5460	38.83	4100
7	37.43	2090	39.88	5830	38.57	3710	39.56	5270	37.83	1960	37.50	1800	41.83	9490	41.75	9320	47.33	23620	40.16	6330	38.83	4100	38.58	3720
8	37.11	1690	40.11	6230	39.08	4480	39.32	4870	37.75	1860	37.83	2220	41.66	9140	41.25	8320	46.75	22000	40.25	6490	39.08	4480	38.50	3600
9	36.96	1510	40.11	6230	39.96	5960	38.78	4020	37.66	1750	37.91	2330	42.66	11240	41.25	8320	46.58	21520	40.16	6330	39.33	4880	38.00	2880
10	37.16	1750	39.96	5960	40.40	6760	38.38	3420	37.66	1750	37.83	2220	42.75	11440	41.08	8000	46.50	21300	40.08	6180	39.52	5200	38.16	3100
11	37.47	2140	40.11	6230	40.84	7560	37.99	2870	36.42	530	36.59	770	42.16	10190	40.91	7680	46.50	21300	39.83	5730	38.83	4100	38.41	3460
12	37.47	2140	39.64	5400	40.99	7830	37.99	2860	37.16	1280	37.66	2000	41.83	9490	40.83	7530	46.58	21520	40.33	6630	39.00	4350	38.16	3100
13	37.23	1840	40.17	6340	41.20	8230	37.98	2850	37.75	1980	38.08	2570	41.66	9140	40.16	6330	46.58	21520	41.00	7850	39.08	4480	37.75	2530
14	37.32	1950	39.79	5670	41.61	9040	37.96	2830	37.66	1870	38.08	2570	41.33	8480	42.75	11440	46.58	21520	41.50	8820	39.08	4480	37.75	2530
15	37.69	2450	39.79	5670	41.47	8760	37.96	2820	37.75	1980	38.04	2520	40.33	6680	42.33	10540	46.50	21300	41.17	8170	38.75	3980	37.75	2530
16	37.93	2780	39.64	5400	41.20	8230	37.95	2810	37.66	1870	38.04	2520	40.91	7680	42.16	10190	46.33	20020	41.17	8170	38.83	4100	37.16	1750
17	37.76	2540	39.48	5140	40.26	6500	37.94	2800	37.66	1870	38.08	2570	40.16	6330	42.16	10190	46.00	19900	41.33	8480	38.92	4230	37.75	2530
18	37.23	1840	39.32	4870	40.62	7160	37.93	2790	36.40	510	36.67	850	40.25	6490	42.00	9850	45.50	18500	41.50	8820	38.83	4100	37.83	2640
19	37.07	1660	39.32	4870	40.55	7030	37.92	2770	36.09	294	38.00	2460	40.41	6780	41.83	9490	45.33	18020	41.58	8980	38.42	3480	38.58	3720
20	37.90	2740	39.09	4500	40.55	7030	37.91	2760	37.25	1380	38.00	2460	40.50	6940	41.16	8150	44.75	16400	41.67	9160	38.33	3340	38.33	3340
21	37.94	2800	38.93	4240	40.55	7030	37.91	2750	37.75	2120	38.00	2460	41.41	8640	41.83	9490	44.33	15280	42.08	10020	38.50	3600	38.25	3230
22	37.40	2050	38.93	4240	40.40	6760	37.90	2740	37.83	2220	37.91	2330	42.41	10710	42.33	10540	43.41	12970	41.58	8980	38.33	3340	38.16	3100
23	39.34	4900	38.85	4120	40.40	6760	37.89	2730	37.83	2220	37.66	510	43.75	13800	42.16	10190	43.08	12180	41.67	9160	38.42	3480	37.16	1750
24	37.84	2640	38.78	4020	40.18	6360	37.88	2720	37.91	2330	37.91	2330	44.50	15720	43.00	12000	42.75	11440	41.17	8170	38.50	3600	37.83	2640
25	38.29	3290	38.78	4020	40.40	6760	37.88	2710	36.59	770	36.84	1030	44.16	14840	43.58	13380	42.25	10380	41.33	8480	38.83	4100	37.75	2530
26	39.73	5560	39.06	4440	40.03	6100	37.87	2700	38.00	2460	36.92	1120	44.00	14430	44.00	14430	41.50	8820	41.17	8170	38.08	2990	37.83	2640
27	39.81	5700	39.32	4870	39.88	5830	37.86	2690	38.08	2570	38.16	2680	43.75	13800	44.41	15490	42.08	10020	41.00	7850	38.50	3600	37.92	2770
28	39.73	5560	39.25	4750	39.88	5830	37.85	2680	38.16	2680	38.25	2810	43.58	13380	44.91	16850	42.25	10380	41.17	8170	38.58	3720	37.83	2640
29	40.62	7160	39.25	4750	40.62	7160	37.85	2680	.....	.....	38.16	2680	42.83	11620	45.41	18250	42.58	11070	40.50	6940	38.67	3860	37.92	2770
30	40.55	7030	39.32	4870	40.48	6900	37.84	2660	.....	.....	38.33	2920	42.66	11240	45.58	18720	42.75	11440	40.67	7250	38.58	3720	37.16	1750
31	40.10	6220	.....	.....	40.48	6900	37.84	2650	.....	.....	38.33	2920	.....	.....	45.83	19420	.....	.....	39.83	5730	38.50	3600	.....	.....

Monthly Discharge of Spanish River at Webbwood for 1916-7

Drainage Area, 4,340 Square Miles

Month	Discharge in Second-feet			Discharge in Second-feet per Square Mile			Run-off
	Maximum	Minimum	Mean	Maximum	Minimum	Mean	Depth in Inches on Drainage Area
October (1916)	7,160	1,510	3,058	1.65	.35	.70	.81
November "	6,630	4,020	5,310	1.53	.93	1.22	1.36
December "	9,040	2,440	6,115	2.08	.56	1.41	1.63
January (1917)	5,940	2,650	3,501	1.37	.61	.81	.93
February	2,220	294	1,730	.51	.07	.40	.42
March	2,920	510	2,108	.67	.12	.49	.56
April	15,720	3,340	9,678	3.62	.77	2.23	2.49
May	19,420	6,330	11,504	4.47	1.46	2.65	3.06
June	23,620	8,820	17,605	5.44	2.03	4.06	4.53
July	11,070	5,730	8,056	2.55	1.32	1.86	2.14
August	6,490	2,990	4,235	1.50	.69	.98	1.13
September	4,100	1,750	2,906	.94	.40	.67	.75
The year	23,620	294	6,327	5.44	.07	1.46	19.79

Sturgeon River at Smoky Falls

Location—At the highway bridge at Smoky Falls Post Office, and two miles above the Smoky Falls, Township of Springer, Nipissing District.

Records Available—Discharge measurements from August, 1912. Daily gauge heights, January 12 to 31, 1914, and from March 15, 1914.

Drainage Area—2,570 square miles.

Gauge—Vertical steel staff with enamelled face, graduated in feet and inches, and attached to a wooden pile on the right, upstream side of the bridge. The zero of the gauge (elevation 32.00) is referred to a bench mark (elevation 53.47) painted on a rock on the right bank of the river, about 175 feet above the bridge.

Channel—Straight for about 700 feet above and about 1 mile below the station. The banks are fairly high, clean, sandy and not liable to overflow. The bed of the stream is composed of clay and sand, slightly shifting. The current is fast and smooth, flowing through six channels, formed by bridge piers and abutments.

Discharge Measurements—Made from the bridge during all stages.

Winter Flow—During the winter months the river is covered with ice, and measurements are made through the ice to determine the winter discharge. The relation of gauge height to discharge is seriously affected by ice.

Regulation—Dams above are used for power and log driving purposes.

Accuracy—The open water rating curve is fairly well defined. The relation of gauge height to discharge is affected during the log-driving season.

Observer—A. Pineault, Smoky Falls.

Discharge Measurements of Sturgeon River at Smoky Falls in 1916-7

Date	Hydrographer	Width in Feet	Area of Section in Sq. Feet	Mean Velocity in Feet per Sec.	Gauge Height in Feet	Discharge in Sec-Feet	Discharge in Second-feet per Square Mile
1916							
Nov. 4....	Murray, W. S ..	210	2,125	1.14	34.83	2,425(38)	.....
1917							
Jan. 26....	" ..	220	4,193	.47	34.33	1,982(39)	.....
Feb. 7....	" ..	220	4,137	.45	34.08	1,873(40)	.....
Mar. 19....	" ..	225	3,841	.43	33.91	1,658(41)	.....
April 21....	" ..	210	2,802	2.69	38.00	7,538(42)	.....
May 4....	" ..	210	3,293	3.70	40.41	12,184	.....
" 5....	" ..	210	3,234	3.60	40.37	11,776	.....
Oct. 19....	Roberts, E.....	193	2,063	.80	33.85	1,599	.....

(38) Reading probably affected by log drive anchored above section.
(39) Ice measurement taken 150 feet above regular section.
(40) Ice measurement taken 150 feet above regular section.
(41) Ice measurement taken 150 feet above regular section.
(42) Logs on control above section.

Daily Gauge Height and Discharge of Sturgeon River at Smoky Falls for 1916-7

Drainage Area, 2,570 Square Miles

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge
	Feet	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*
1	32.71	975	34.91	3160	35.66	4040	34.33	2080	34.16	1770	33.71	1500	35.20	2850	38.58	9030	37.74	7680	36.25	5300	35.21	3640	35.04	3360
2	32.87	1060	35.00	3300	35.58	3910	34.29	2040	34.08	1720	33.66	1480	35.62	3490	39.62	10690	37.62	7490	36.21	5240	35.12	3490	34.96	3240
3	32.91	1090	35.00	3300	35.41	3640	34.25	2000	34.00	1670	33.75	1520	35.58	3430	40.25	11700	37.33	7030	36.12	5090	34.96	3240	34.79	2980
4	32.91	1090	35.00	3300	35.41	3640	34.16	1930	34.00	1670	33.75	1520	35.79	3760	40.41	11960	37.62	7490	36.12	5090	34.87	3100	34.62	2750
5	32.91	1090	35.00	3300	35.33	3510	34.16	1850	34.00	1670	33.75	1520	36.08	4230	40.33	11830	38.12	8290	36.16	5160	34.83	3040	34.45	2530
6	33.00	1150	34.87	3100	35.41	3640	34.25	1920	33.91	1620	33.75	1520	36.12	4290	40.12	11490	38.08	8230	36.12	5090	34.71	2860	34.29	2350
7	32.95	1120	34.62	2750	35.50	3780	34.33	1990	34.08	1720	33.75	1520	35.91	4120	39.87	11090	38.08	8230	36.08	5030	34.71	2860	34.29	2350
8	32.91	1090	34.50	2590	35.50	3780	34.66	2320	34.08	1720	33.83	1570	35.87	4050	39.50	10500	38.16	8360	36.25	5300	34.71	2860	34.58	2690
9	32.91	1090	34.58	2690	35.79	4240	34.66	2320	34.00	1670	33.83	1570	35.79	4080	39.25	10100	38.29	8560	36.25	5300	34.58	2690	34.54	2640
10	32.91	1090	34.79	2840	35.87	4370	34.54	2190	34.00	1670	33.75	1520	35.58	3750	39.04	9760	38.37	8690	36.37	5490	34.58	2690	34.58	2690
11	32.79	1020	34.91	3000	35.62	3970	34.50	2150	34.00	1670	33.75	1520	35.41	3640	38.87	9490	38.21	8440	36.37	5490	34.58	2690	34.66	2800
12	32.81	1030	34.91	3000	35.66	4040	34.50	2150	33.91	1620	33.75	1520	35.16	3240	38.79	9360	37.79	7760	36.37	5490	34.67	2810	34.75	2920
13	32.83	1040	34.91	3000	35.58	3910	34.58	2230	33.91	1620	33.75	1520	35.12	3330	38.58	9030	37.79	7760	36.67	5970	34.67	2810	34.71	2860
14	32.87	1060	34.83	2890	35.62	3970	34.58	2230	33.91	1620	33.79	1540	34.91	3160	38.54	8960	37.96	8040	37.00	6500	34.63	2760	34.62	2750
15	32.91	1090	34.71	2730	35.71	4120	34.50	2150	33.91	1620	33.83	1570	35.00	3300	38.16	8360	38.00	8100	37.17	6770	34.58	2690	34.58	2690
16	32.91	1090	34.50	2470	35.58	3910	34.50	2150	33.91	1620	33.83	1570	35.12	3490	37.87	7890	38.00	8100	37.33	7030	34.67	2810	34.41	2480
17	33.12	1250	34.41	2370	35.37	3410	34.50	2150	33.83	1570	33.83	1570	35.50	4100	37.62	7490	37.87	7890	37.25	6900	34.67	2810	34.25	2300
18	33.16	1280	34.16	2110	35.12	3020	34.58	2230	33.83	1570	33.91	1620	35.87	4690	37.54	7360	37.83	7830	37.79	7760	34.71	2860	34.12	2170
19	33.25	1350	34.16	2110	35.00	2850	34.41	2060	33.75	1520	33.91	1620	36.41	5560	37.46	7240	37.79	7760	36.67	5970	34.67	2810	33.96	2010
20	33.66	1720	34.08	2030	34.83	2630	34.41	2060	33.75	1520	33.95	1640	37.20	6820	37.37	7090	37.71	7640	36.59	5700	34.79	2980	33.83	1900
21	34.37	2420	33.02	1680	34.75	2530	34.41	2060	33.75	1520	34.00	1670	37.95	8020	37.25	6900	37.33	7030	36.29	5360	34.92	3170	33.71	1810
22	34.66	2960	33.54	1630	34.66	2430	34.50	2150	33.75	1520	34.00	1670	38.00	8100	37.25	6900	37.12	6690	36.17	5170	34.88	3110	33.62	1740
23	34.66	2960	34.16	2110	34.66	2430	34.41	2060	33.75	1520	34.04	1690	37.91	7960	38.16	8360	37.04	6560	36.12	5090	34.83	3040	33.62	1740
24	34.66	2960	34.71	2730	34.75	2530	34.41	2060	33.66	1480	34.20	1800	37.83	7830	39.53	10550	36.79	6160	36.12	5090	34.83	3040	33.58	1720
25	34.66	2960	34.54	2520	34.66	2430	34.41	2060	33.58	1440	34.25	1840	37.83	7830	39.58	10630	36.62	5890	36.04	4960	34.92	3170	33.62	1740
26	34.75	3090	34.41	2370	34.58	2340	34.33	1900	33.66	1480	34.25	1840	38.16	8360	39.46	10440	36.50	5700	35.88	4710	34.83	3040	33.67	1780
27	34.83	3220	34.50	2470	34.54	2290	34.25	1840	33.66	1480	34.54	2090	38.58	9030	39.25	10100	36.62	5890	35.79	4560	34.83	3040	33.67	1780
28	34.79	3160	34.87	2950	34.50	2250	34.25	1840	33.66	1480	34.83	2390	38.66	9160	38.95	9620	36.75	6100	35.62	4290	34.92	3170	33.75	1840
29	34.83	3220	35.16	3240	34.41	2160	34.25	1840	.....	....	34.91	2480	38.54	8960	38.83	9430	36.46	5640	35.54	4160	34.83	3040	33.83	1900
30	34.83	3220	35.58	3910	34.33	2080	34.25	1840	.....	....	34.83	2390	38.50	8900	38.50	8900	36.37	5490	35.56	4200	34.87	3100	33.83	1900
31	34.83	3220	.....	....	34.33	2080	34.16	1770	.....	....	34.83	2390	.....	....	38.16	8360	.....	....	35.29	3760	34.46	2540	.....	....

Monthly Discharge of Sturgeon River at Smoky Falls for 1916-7

Drainage Area, 2,579 Square Miles

Month	Discharge in Second-feet.			Discharge in Second-feet per Square Mile			Run-off
	Maximum	Minimum	Mean	Maximum	Minimum	Mean	Depth in Inches on Drainage Area.
October... (1916)	3,220	975	1,812	1.25	.38	.71	.82
November "	3,910	1,630	2,722	1.52	.63	1.06	1.18
December "	4,370	2,080	3,224	1.70	.81	1.25	1.44
January .. (1917)	2,320	1,770	2,052	.90	.69	.80	.92
February	1,770	1,440	1,599	.69	.56	.62	.65
March.....	2,480	1,480	1,715	.96	.58	.67	.77
April.....	9,160	2,850	5,451	3.56	1.11	2.12	2.37
May.....	11,960	6,900	9,375	4.65	2.68	3.65	4.21
June	8,690	5,490	7,351	3.38	2.14	2.86	3.19
July.....	7,760	3,760	5,388	3.02	1.46	2.10	2.42
August.....	3,640	2,690	2,966	1.42	1.05	1.15	1.33
September.....	3,360	1,720	2,347	1.31	.67	.91	1.02
The year	11,960	975	3,845	4.65	.38	1.50	20.30

Vermilion River near Whitefish

Location—At the C.P.R. bridge, two miles east of the Whitefish station, Township of Graham, District of Sudbury.

Records Available—Discharge measurements from August, 1913. Daily gauge heights from June 11, 1915.

Drainage Area—1,580 square miles.

Gauge—Vertical steel staff with enamelled face graduated in feet and inches attached to pile at left abutment of old highway bridge. Zero of the gauge is at an elevation of 25.00 referred to a bench mark elevation 38.39 painted on rock on right bank 15 feet above section.

Channel and Control—Straight for about 300 feet above and 700 feet below the station. Both banks are high, rocky and wooded, and not liable to overflow. Bed of stream is rocky and permanent, current is swift, two channels existing at all stages. At low stages log jams occur at the rapids, causing backwater on the gauge.

Discharge Measurements—Made from the bridge with current meter.

Winter Flow—The relation between the gauge heights and discharge is seriously affected by ice under some conditions.

Accuracy—The relation between gauge heights and discharge have been so seriously disturbed by ice and log conditions during the past year that reliable estimates of flow have not been deemed possible on the information available.

Observer—A. Boucher, Whitefish.

Discharge Measurements of Vermilion River near Whitefish in 1917

Date	Hydrographer	Width in Feet	Area of Section in Sq. Feet	Mean Velocity in Feet per Sec.	Gauge Height in Feet	Discharge in Sec-Feet	Discharge in Second-feet per Square Mile
1917							
Mar. 15	Murray, W. S..	90	787	.91	26.16	721(24)	.....
April 18	" ..	115	1,194	2.75	30.75	3,285(25)	.....
May 17	" ..	115	1,229	4.72	30.66	5,804(26)	.....
Oct. 18	Roberts, E.....	165	1,762	.10	27.00	188	.....

(24) Reading taken 100 yards below gauge on C.P.R. bridge. Conditions unfavorable for good results.
(25) Same remarks as (24). Surface velocities recorded, and co-efficient applied.
(26) Same remarks as (24).

Daily Gauge Height and Discharge of Vermilion River near Whitefish for 1916-7

Drainage Area, 1,580 Square Miles

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge
	Feet	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Fect*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*
1	26.16	.....	27.75	.....	28.66	.....	28.50	.....	27.91	.....	26.08	.....	26.50	.....	32.08	.....	32.08	.....	29.83	.....	29.83	.....	28.33	.....
2	26.16	.....	27.75	.....	28.75	.....	28.41	.....	27.91	.....	26.08	.....	26.91	.....	32.16	.....	32.33	.....	29.91	.....	29.75	.....	28.33	.....
3	26.16	.....	27.83	.....	28.75	.....	28.33	.....	27.91	.....	26.08	.....	27.66	.....	32.33	.....	32.33	.....	30.00	.....	29.67	.....	28.25	.....
4	26.16	.....	27.83	.....	28.83	.....	28.33	.....	27.91	.....	26.08	.....	27.75	.....	32.41	.....	32.41	.....	29.91	.....	29.50	.....	28.25	.....
5	26.16	.....	27.00	.....	28.83	.....	28.16	.....	27.91	.....	26.08	.....	28.41	.....	32.50	.....	32.41	.....	29.83	.....	29.50	.....	28.17	.....
6	26.16	.....	28.16	.....	28.91	.....	28.16	.....	27.83	.....	26.16	.....	28.58	.....	32.33	.....	32.33	.....	29.75	.....	29.50	.....	28.16	.....
7	26.25	.....	28.25	.....	29.08	.....	28.16	.....	27.83	.....	26.16	.....	28.75	.....	32.16	.....	32.16	.....	29.75	.....	29.42	.....	28.16	.....
8	26.25	.....	28.33	.....	29.16	.....	28.08	.....	27.75	.....	26.16	.....	29.41	.....	31.91	.....	31.33	.....	29.75	.....	29.42	.....	28.08	.....
9	26.25	.....	28.72	.....	29.75	.....	28.08	.....	27.75	.....	26.16	.....	29.91	.....	31.66	.....	31.33	.....	29.75	.....	29.42	.....	28.00	.....
10	26.25	.....	29.53	.....	30.66	.....	28.00	.....	27.66	.....	26.16	.....	30.25	.....	31.50	.....	31.33	.....	29.75	.....	29.42	.....	28.00	.....
11	26.25	.....	29.51	.....	30.83	.....	27.91	.....	27.66	.....	26.16	.....	30.66	.....	31.00	.....	31.25	.....	29.83	.....	29.33	.....	28.00	.....
12	26.25	.....	29.66	.....	31.00	.....	27.91	.....	27.58	.....	26.08	.....	30.91	.....	31.00	.....	31.16	.....	29.83	.....	29.33	.....	28.00	.....
13	26.25	.....	29.83	.....	31.00	.....	27.83	.....	27.58	.....	26.08	.....	30.75	.....	30.91	.....	31.16	.....	29.83	.....	29.33	.....	28.00	.....
14	26.25	.....	29.66	.....	30.16	.....	27.83	.....	27.50	.....	26.16	.....	30.33	.....	30.83	.....	31.08	.....	29.91	.....	29.33	.....	28.00	.....
15	26.25	.....	29.66	.....	30.58	.....	27.83	.....	27.50	.....	26.16	.....	30.06	.....	30.75	.....	31.00	.....	30.25	.....	29.33	.....	27.92	.....
16	26.33	.....	29.51	.....	30.33	.....	27.83	.....	27.50	.....	26.16	.....	29.41	.....	30.66	.....	30.91	.....	30.50	.....	29.33	.....	27.83	.....
17	26.33	.....	29.53	.....	30.91	.....	27.91	.....	27.58	.....	26.16	.....	29.75	.....	30.66	.....	30.91	.....	30.67	.....	29.33	.....	27.75	.....
18	26.33	.....	29.35	.....	30.00	.....	27.91	.....	27.33	.....	26.08	.....	30.75	.....	30.58	.....	30.83	.....	30.83	.....	29.33	.....	27.41	.....
19	26.41	.....	29.35	.....	29.83	.....	27.91	.....	27.16	.....	26.08	.....	31.75	.....	30.58	.....	30.66	.....	30.83	.....	29.25	.....	27.25	.....
20	26.41	.....	29.35	.....	28.33	.....	27.91	.....	27.08	.....	26.16	.....	32.50	.....	30.58	.....	30.25	.....	30.83	.....	29.17	.....	27.25	.....
21	26.58	.....	29.33	.....	28.75	.....	27.83	.....	26.91	.....	26.16	.....	32.33	.....	30.58	.....	30.16	.....	30.75	.....	29.00	.....	27.16	.....
22	26.75	.....	29.16	.....	28.75	.....	27.83	.....	26.75	.....	26.16	.....	32.83	.....	30.75	.....	30.08	.....	30.67	.....	28.92	.....	27.16	.....
23	26.08	.....	29.08	.....	28.75	.....	27.83	.....	26.58	.....	26.25	.....	33.83	.....	31.41	.....	30.00	.....	30.58	.....	28.50	.....	27.16	.....
24	27.08	.....	29.08	.....	28.75	.....	27.83	.....	26.41	.....	26.25	.....	33.50	.....	31.75	.....	29.91	.....	30.67	.....	28.00	.....	27.16	.....
25	27.25	.....	29.08	.....	28.75	.....	27.83	.....	26.25	.....	26.25	.....	33.25	.....	32.91	.....	29.83	.....	30.58	.....	28.00	.....	27.16	.....
26	27.25	.....	28.41	.....	28.66	.....	27.83	.....	26.25	.....	26.25	.....	33.16	.....	32.91	.....	29.75	.....	30.50	.....	28.50	.....	27.16	.....
27	27.33	.....	28.66	.....	28.66	.....	28.00	.....	26.16	.....	26.25	.....	32.83	.....	32.75	.....	29.66	.....	30.42	.....	28.42	.....	27.16	.....
28	27.66	.....	28.66	.....	28.66	.....	28.00	.....	26.16	.....	26.33	.....	32.50	.....	32.66	.....	29.66	.....	30.42	.....	28.42	.....	27.16	.....
29	27.66	.....	28.66	.....	28.66	.....	28.00	.....	.....	.....	26.33	.....	32.33	.....	32.58	.....	29.58	.....	30.17	.....	28.33	.....	27.16	.....
30	27.75	.....	28.66	.....	28.66	.....	28.00	.....	.....	.....	26.33	.....	32.25	.....	32.50	.....	29.75	.....	29.92	.....	28.33	.....	27.08	.....
31	27.75	.....	.....	.....	28.50	.....	27.91	.....	.....	.....	26.33	.....	.....	.....	32.33	.....	.....	.....	29.83	.....	28.33	.....	.....	.....

Wanapitei River at McVittie's

Location—Along the C. N. Ry, line, twenty miles south of the Town of Sudbury, and about two miles up stream from McVittie's power house, and 300 feet above Water Falls, southeast corner of the Township of Secord, District of Sudbury (Mining Division).

Records Available—Discharge measurements from September, 1916. Daily gauge heights from October 1, 1916.

Drainage Area—1,190 square miles.

Gauge—Chain gauge on left bank fifty feet above section. When the gauge reads zero the elevation of the water is 99.00, referred to a B.M. (elev. 105.15) on a stump just below section.

Channel—Straight for about 400 feet above and 300 feet below the station. Banks are low, rocky, and wooded, and liable to overflow. The bed of the stream is composed of clay, practically permanent; the current is slow.

Control—During log driving periods logs may jam at the head of the falls, which is 300 feet below station. The jam may cause a back water affect at the gauging station.

Discharge Measurements—Made from boat with a small Price current meter.

Observer—J. S. McVittie, McVittie's Siding.

Discharge Measurements of Wanapitei River at McVittie's in 1916-7

Date	Hydrographer	Width in Feet	Area of Section in Sq. Feet	Mean Velocity in Feet per Sec.	Gauge Height in Feet	Discharge in Sec-Feet	Discharge in Second-feet per Square Mile
1916							
Nov. 1....	Murray, W. S. ..	151	2,221	.36	101.23	791	.....
1917							
Jan. 12....	" ..	150	2,109	.32	101.10	684 (4)	.....
Feb. 21....	" ..	48	288	2.21	100.91	638 (5)	.....
April 27....	" ..	156	2,432	.75	102.50	1,833 (6)	.....
May 16....	" ..	157	2,725	1.31	104.41	3,577	.....
Oct. 31....	Roberts, E.....	158	2,359	.65	102.00	1,530	.....

(4) Ice measurement.
(5) Ice measurement taken 400 feet below regular section.
(6) Log drive may affect.

Daily Gauge Height and Discharge of Wanapitei River at McVittie's for 1916-7

Drainage Area, 1,190 Square Miles

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge
	Feet	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*
1	100.83	650	101.25	925	102.02	1480	101.33	780	101.16	670	100.54	266	101.04	590	102.79	2100	.....	.....	104.25	3420	.....	.....	103.87	3050
2	100.66	540	101.21	895	101.91	1400	101.33	780	101.02	580	100.50	240	101.00	565	103.46	2670	.....	.....	104.12	3290	.....	.....	103.00	2280
3	100.56	474	101.16	865	101.87	1370	101.29	755	100.94	525	100.50	240	102.29	1460	103.79	2970	.....	.....	104.04	3210	.....	.....	102.92	2210
4	100.71	570	101.12	840	101.83	1340	101.25	725	100.81	440	100.52	253	102.79	1850	103.50	2710	.....	.....	103.87	3050	.....	.....	102.80	2100
5	100.62	515	101.04	785	101.83	1340	101.27	740	100.96	540	100.41	186	103.00	2020	103.00	2280	.....	.....	103.75	2940	102.10	1540	102.67	2000
6	100.64	525	101.02	775	101.83	1340	101.33	780	100.89	494	100.41	186	102.91	1950	102.83	2130	.....	.....	103.54	2750	102.08	1530	101.83	1340
7	100.62	515	101.04	785	101.83	1340	101.33	780	100.83	455	100.41	186	102.66	1750	102.91	2200	.....	.....	103.41	2630	101.75	1280	101.85	1360
8	100.64	525	100.85	660	101.79	1310	101.25	725	100.91	505	100.39	174	102.29	1460	103.33	2560	.....	.....	103.33	2560	101.31	965	101.89	1390
9	100.91	700	100.87	675	102.62	1960	101.23	715	100.91	505	100.33	138	102.12	1340	103.41	2630	.....	.....	103.16	2410	101.40	1030	101.87	1370
10	100.91	700	101.35	995	103.04	2220	101.16	670	100.80	435	100.54	266	101.83	1120	103.71	2900	.....	.....	102.75	2060	101.42	1040	101.75	1280
11	100.89	690	101.43	1050	102.87	2080	101.12	645	101.16	670	100.50	240	101.79	1160	103.75	2940	.....	.....	102.50	1860	101.44	1060	101.73	1270
12	100.91	700	101.31	965	102.50	1780	101.08	615	101.09	625	100.52	253	101.48	945	103.91	3080	.....	.....	102.83	2130	101.42	1040	101.66	1220
13	100.93	715	101.21	895	102.00	1400	101.06	605	100.98	550	100.50	240	101.35	855	104.00	3170	.....	.....	103.58	2780	101.71	1250	101.71	1250
14	101.03	780	101.14	850	101.64	1130	101.06	605	101.06	605	100.46	216	101.12	775	104.08	3250	.....	.....	103.75	2940	101.83	1340	101.67	1220
15	101.10	825	101.04	785	101.58	1020	101.04	590	101.58	945	100.44	204	101.21	830	104.33	3500	.....	.....	103.71	2900	102.08	1530	101.64	1200
16	101.12	840	101.00	760	101.58	1020	101.06	605	101.58	945	100.35	150	101.41	965	104.50	3690	.....	.....	103.67	2860	102.17	1600	100.54	461
17	101.12	840	100.91	700	101.62	1040	101.00	565	101.46	865	100.41	186	101.87	1370	104.37	3550	.....	.....	103.58	2780	102.23	1640	101.04	785
18	101.18	875	100.79	625	101.60	1030	101.02	580	101.46	865	100.41	186	102.41	1790	104.66	3870	.....	.....	103.52	2730	102.17	1600	100.87	675
19	101.29	955	100.91	700	101.58	1020	101.06	605	101.16	670	100.39	174	102.91	2200	105.88	5270	.....	.....	103.54	2750	102.10	1540	100.70	565
20	101.39	1020	101.12	840	101.58	1020	101.00	565	101.16	670	100.41	186	104.12	3290	.....	.....	.....	.....	103.50	2710	102.10	1540	100.70	565
21	102.00	1470	101.08	810	101.52	975	101.00	565	100.96	540	100.43	198	105.08	4350	.....	.....	.....	.....	103.44	2660	102.04	1500	100.68	550
22	101.87	1370	.....	.....	101.46	930	101.00	565	101.00	565	100.45	210	104.79	4010	.....	.....	.....	.....	102.29	1690	101.96	1440	100.70	565
23	101.64	1200	101.12	840	101.43	910	101.00	565	100.87	480	.....	.....	103.96	3130	.....	.....	.....	.....	103.12	2380	101.75	1280	100.68	550
24	101.21	895	101.54	1130	101.41	895	100.89	494	100.87	480	.....	.....	102.79	2100	.....	.....	.....	.....	103.00	2280	101.86	1360	100.70	565
25	101.00	760	101.62	1180	101.37	805	101.21	700	100.83	455	.....	.....	102.37	1760	.....	.....	.....	.....	102.83	2130	102.08	1530	100.68	550
26	100.94	720	101.62	1180	101.35	790	101.33	780	100.79	429	101.58	945	102.25	1660	.....	.....	.....	.....	102.75	2060	.....	.....	100.72	580
27	101.12	840	101.56	1140	101.37	805	101.27	740	100.62	318	.....	.....	102.50	1860	.....	.....	.....	.....	.....	.....	.....	.....	100.75	595
28	101.21	895	101.56	1140	101.39	820	101.23	715	100.46	216	.....	.....	102.37	1760	.....	.....	.....	.....	.....	.....	.....	.....	100.75	595
29	101.12	840	101.66	1220	101.39	820	101.21	700	.....	.....	101.46	865	102.33	1720	.....	.....	104.25	3420	.....	.....	.....	.....	100.77	610
30	101.16	865	101.91	1400	101.35	790	101.21	700	.....	.....	101.29	755	102.46	1830	.....	.....	104.46	3650	.....	.....	.....	.....	100.77	610
31	101.21	895	.....	.....	101.35	790	101.16	670	.....	.....	101.16	670	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Monthly Discharge of Wanapitei River at McVittie's for 1916-7

Drainage Area, 1,190 Square Miles

Month	Discharge in Second-feet			Discharge in Second-feet per Square Mile			Run-off
	Maximum	Minimum	Mean	Maximum	Minimum	Mean	Depth in Inches on Drainage Area
October...(1916)	1,470	474	797	1.24	.40	.67	.77
November "	1,400	625	911	1.18	.53	.77	.86
December "	2,220	790	1,193	1.87	.66	1.00	1.15
January ..(1917)	780	444	665	.66	.42	.56	.65
February	945	216	573	.79	.18	.48	.50
March.....	945	138	300	.79	.12	.25	.29
April.....	4,350	565	1,749	3.66	.47	1.47	1.64
May.....	5,270	2,100	3,025	4.43	1.76	2.54	2.93
June	3,650	3,420	3,535	3.07	2.87	2.97	3.31
July.....	3,420	1,690	2,614	2.87	1.42	2.20	2.54
August.....	1,640	965	1,364	1.38	.81	1.15	1.33
September.....	3,050	461	1,112	2.56	.39	.93	1.04
The year.....	5,270	1.38	1,486	4.43	.12	1.25	16.95

Regular Stations

NORTH-WESTERN ONTARIO DISTRICT

River	Location	Drainage Area Sq. Miles	Township	District
Eagle	at Eagle River	970		Kenora
English	at Caribou Falls	21,600		"
"	at Ear Falls	11,700		"
"	at Manitou Falls	14,600		"
"	at Oak Falls	15,570		"
Footprint	at Rainy Lake Falls	590		Rainy River
Manitou	at Devil's Cascades	435		"
Seine	at Skunk Rapids	2,300		"
Turtle	at Mountain Rapids	1,760		"
Wabigoon	at Quibell	2,400		Kenora
"	at Wabigoon Falls	3,120		"
Winnipeg	at Whitedog Falls	27,135		"

Eagle River at Eagle River

Location—At the highway bridge 1,000 feet south of the C.P. Ry. crossing, in the Township of Aubrey, District of Kenora. This river is a tributary of the Wabigoon River.

Records Available—Discharge measurements from January, 1914. Daily gauge heights from February 12, 1914.

Drainage Area—970 square miles.

Gauge—Vertical staff with enamelled face screwed to a 2 x 4 inch scantling, which is nailed to the south side of the bridge crib near the south-east corner, and next to the left bank of the river. The zero on the gauge (elev. 1,172.99) is referred to a bench mark (elev. 1,176.56, C.P.R. datum) painted on a point of rock on the left bank a few feet south-west of gauge.

Channel and Control—Straight for about 100 feet above the station, with the water flowing slowly. Below the section the channel is straight for about 20 feet, with the water running swiftly to the "Cascades." The banks are clean, high, rocky and not liable to overflow. The bed consists of rock, and is permanent. At extreme highwater the flow is cut up by the bridge piers, but under normal conditions the flow is all through one channel.

Discharge Measurements—Made from the highway bridge with a small Price current meter.

Winter Flow—Not affected by ice. The water at the section never freezes.

Accuracy—The station rating curve is well defined. Fluctuation in gauge heights is occasionally augmented by wind on Eagle Lake. This is in every way an exceptionally good station.

Observer—J. Nelson, Eagle River.

Discharge Measurements of Eagle River at Eagle River in 1917

Date	Hydrographer	Width in Feet	Area of Section in Sq. Feet	Mean Velocity in Feet per Sec.	Gauge Height in Feet	Discharge in Sec-Feet	Discharge in Second-feet per Square Mile
1917							
April 27....	Carmichael, R.M.	50	149	2.59	1174.39	385	.....
" 27....	"	50	149	2.59	1174.39	384	.....
" 28....	"	50	153	2.62	1174.42	403	.....
" 28....	Taylor, J. R....	50	153	2.66	1174.43	408	.....
" 30....	"	50	158	2.74	1174.50	435	.....
" 30....	"	50	158	2.64	1174.49	419	.....
May 1....	"	50	158	2.63	1174.53	417	.....
" 2....	"	51	158	2.72	1174.57	431	.....
" 2....	"	51	158	2.76	1174.57	435	.....
" 3....	"	51	163	2.80	1174.61	459	.....
" 3....	Carmichael, R.M.	51	163	2.74	1174.65	448	.....
" 4....	"	51	163	2.86	1174.63	468	.....
" 5....	"	53	170	2.94	1174.70	500	.....

Daily Gauge Height and Discharge of Eagle River at Eagle River for 1916-7

Drainage Area, 970 Square Miles

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge
	Feet	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*
1	1175.37	800	1175.09	648	1174.78	518	1174.76	510	1174.68	481	1174.53	432	1174.37	386	1174.51	426	1174.87	553	1174.49	420	1174.66	474	1174.20	341
2	1175.39	810	1175.07	639	1174.80	525	1174.76	510	1174.68	481	1174.53	432	1174.37	386	1174.55	439	1174.87	553	1174.47	414	1174.64	468	1174.20	341
3	1175.39	810	1175.07	639	1174.80	525	1174.76	510	1174.68	481	1174.53	432	1174.34	378	1174.61	457	1174.82	533	1174.45	408	1174.61	457	1174.18	336
4	1175.37	800	1175.07	639	1174.78	518	1174.76	510	1174.66	474	1174.51	426	1174.34	378	1174.64	468	1174.80	525	1174.43	403	1174.61	457	1174.18	336
5	1175.37	800	1175.07	639	1174.78	518	1174.76	510	1174.64	468	1174.51	426	1174.32	372	1174.68	481	1174.76	510	1174.41	397	1174.61	457	1174.18	336
6	1175.32	780	1175.03	621	1174.80	525	1174.74	503	1174.61	457	1174.51	426	1174.32	372	1174.72	495	1174.74	503	1174.41	397	1174.59	451	1174.24	351
7	1175.32	780	1175.03	621	1174.78	518	1174.74	503	1174.61	457	1174.51	426	1174.32	372	1174.74	503	1174.72	495	1174.41	397	1174.55	439	1174.24	351
8	1175.32	780	1175.01	611	1174.78	518	1174.74	503	1174.59	451	1174.51	426	1174.32	372	1174.78	518	1174.70	488	1174.39	391	1174.51	426	1174.24	351
9	1175.32	780	1174.99	603	1174.78	518	1174.74	503	1174.59	451	1174.51	426	1174.30	367	1174.82	533	1174.68	481	1174.39	391	1174.49	420	1174.20	341
10	1175.32	780	1174.99	603	1174.78	518	1174.74	503	1174.57	445	1174.49	420	1174.30	367	1174.87	553	1174.66	474	1174.39	391	1174.45	408	1174.20	341
11	1175.28	760	1174.97	594	1174.80	525	1174.74	503	1174.57	445	1174.47	414	1174.30	367	1174.91	569	1174.64	468	1174.37	386	1174.43	403	1174.18	336
12	1175.26	750	1174.97	594	1174.80	525	1174.72	495	1174.55	439	1174.47	414	1174.28	362	1174.93	578	1174.61	457	1174.37	386	1174.41	397	1174.16	331
13	1175.26	750	1174.97	594	1174.80	525	1174.72	495	1174.55	439	1174.47	414	1174.28	362	1174.95	586	1174.59	451	1174.34	378	1174.41	397	1174.14	326
14	1175.16	705	1174.95	586	1174.80	525	1174.72	495	1174.53	432	1174.47	414	1174.28	362	1174.97	594	1174.53	432	1174.34	378	1174.39	391	1174.11	318
15	1175.16	705	1174.93	578	1174.78	518	1174.72	495	1174.53	432	1174.45	408	1174.28	362	1174.99	603	1174.51	426	1174.32	372	1174.39	391	1174.11	318
16	1175.16	705	1174.91	569	1174.78	518	1174.72	495	1174.53	432	1174.45	408	1174.28	362	1175.01	611	1174.49	420	1174.32	372	1174.37	386	1173.99	291
17	1175.16	705	1174.91	569	1174.78	518	1174.72	495	1174.51	426	1174.45	408	1174.28	362	1175.03	621	1174.51	426	1174.34	378	1174.37	386	1173.97	286
18	1175.16	705	1174.89	561	1174.78	518	1172.72	495	1174.51	426	1174.45	408	1174.28	362	1175.03	621	1174.51	426	1174.34	378	1174.34	378	1173.95	282
19	1175.14	700	1174.89	561	1174.78	518	1174.74	503	1174.51	426	1174.43	403	1174.30	367	1175.03	621	1174.53	432	1174.32	372	1174.34	378	1173.95	282
20	1175.14	700	1174.87	553	1174.78	518	1174.74	503	1174.51	426	1174.43	403	1174.30	367	1175.03	621	1174.53	432	1174.32	372	1174.32	372	1173.95	282
21	1175.14	700	1174.84	541	1174.78	518	1174.74	503	1174.53	432	1174.43	403	1174.30	367	1175.01	611	1174.51	426	1174.32	372	1174.30	367	1173.97	286
22	1175.11	685	1174.84	541	1174.80	525	1174.74	503	1174.53	432	1174.43	403	1174.32	372	1175.01	611	1174.51	426	1174.28	362	1174.28	362	1173.99	291
23	1175.11	685	1174.82	533	1174.80	525	1174.74	503	1174.55	439	1174.41	397	1174.32	372	1175.01	611	1174.51	426	1174.26	356	1174.26	356	1173.99	291
24	1175.11	685	1174.82	533	1174.78	518	1174.72	495	1174.55	439	1174.41	397	1174.34	378	1174.99	603	1174.51	426	1174.24	351	1174.28	362	1173.97	286
25	1175.09	675	1174.80	525	1174.78	518	1174.72	495	1174.53	432	1174.39	391	1174.34	378	1175.01	611	1174.51	426	1174.24	351	1174.26	356	1173.95	282
26	1175.11	685	1174.80	525	1174.78	518	1174.72	495	1174.55	429	1174.39	391	1174.37	386	1174.99	603	1174.49	420	1174.26	356	1174.24	351	1173.95	282
27	1175.09	675	1174.78	518	1174.78	518	1174.72	495	1174.55	439	1174.39	391	1174.41	397	1174.97	594	1174.49	420	1174.28	362	1174.22	346	1173.93	278
28	1175.09	675	1174.76	510	1174.78	518	1174.70	488	1174.53	432	1174.37	386	1174.43	403	1174.95	586	1174.51	426	1174.28	362	1174.22	346	1173.91	273
29	1175.09	675	1174.76	510	1174.76	510	1174.70	488	.....	...	1174.37	386	1174.45	408	1174.93	578	1174.49	420	1174.39	391	1174.20	341	1173.91	273
30	1175.07	665	1174.78	518	1174.76	510	1174.70	488	.....	...	1174.37	386	1174.47	414	1174.91	569	1174.51	426	1174.47	414	1174.20	341	1173.87	264
31	1175.09	675	.....	...	1174.76	510	1174.70	488	.....	...	1174.37	386	.....	...	1174.89	561	.....	...	1174.57	445	1174.20	341	.....	...

Monthly Discharge of Eagle River at Eagle River for 1916-7

Drainage Area, 970 Square Miles

Month	Discharge in Second-feet			Discharge in Second-feet per Square Mile			Run-off
	Maximum	Minimum	Mean	Maximum	Minimum	Mean	Depth in Inches on Drainage Area
October... (1916)	810	665	729	.84	.68	.75	.86
November "	648	510	576	.67	.53	.59	.66
December "	525	510	519	.54	.53	.54	.62
January .. (1917)	510	488	499	.53	.50	.51	.59
February	481	426	445	.50	.44	.46	.48
March	432	386	409	.45	.40	.42	.48
April	414	362	375	.43	.37	.39	.44
May	621	426	562	.64	.44	58	.67
June.....	553	420	458	.57	.43	.47	.52
July	445	351	384	.46	.36	.40	.46
August	474	341	394	.49	.35	.41	.47
September	351	264	309	.36	.27	.32	.36
The year	810	264	472	.84	.27	.49	6.61

English River at Caribou Falls

Location—About 1,200 feet above Caribou Falls, the last falls on the river, and about five miles from the Winnipeg River, District of Kenora.

Records Available—Discharge measurements from May, 1914.

Drainage Area—21,600 square miles.

Gauge—Vertical staff located on the left bank of the river 25.6 feet north of a blazed jack pine, which is used as the initial point for soundings. The zero on the gauge (elevation 100.00) is referred to a bench mark (elevation 109.45) painted on a point of rock 16 feet south of the blazed jack pine.

Channel and Control—Above the station the channel takes a 90 degree curve to the right, thence following comparatively straight to the head of the falls. Both banks are high, rocky and wooded, and not liable to overflow. The bed of the stream is rocky, with large boulders or protruding shelves of rock and practically permanent. The water at the left bank is still, backflow existing at higher stages. The natural control is wide and unobstructed.

Discharge Measurements—Made from a canoe, and occasionally through ice, with a small Price current meter or from raft in winter.

Winter Flow—Ice has little effect, the channel here not freezing over every winter.

Accuracy—A well defined curve has been secured here.

English River at Ear Falls

Location—At the foot of Lac Seul, about three miles below Pine Ridge Hudson's Bay Co's. Post, and about ¼ mile above upper Ear Falls, District of Kenora.

Records Available—Discharge measurements from July, 1914. Weekly gauge heights are secured here and daily gauge heights at a gauge at Pine Ridge Post.

Drainage Area—11,700 square miles.

Gauge—Vertical staff with enamelled face screwed to a 6-inch hewn spruce post which is firmly wedged in the rock of the left bank 200 feet below a 2-inch poplar, which is painted white and used as the initial point for soundings. The zero on the gauge (elev. 115.12) is referred to a bench mark (elev. 122.75) painted on a point of rock 5 feet above the gauge.

Channel and Control—Straight for about 300 feet above and below the station, then turning to the left widens out to the top of the falls. Both banks are high, rocky and wooded, and will not overflow. The bed of the stream at the section is apparently permanent; the current sluggish, and flowing through one channel at all stages. The natural control is wide, shallow and unobstructed.

Discharge Measurements—Made from a canoe with a small Price current meter.

Winter Flow—Ice conditions have only slight effect.

Accuracy—Back flow at the left bank causes a little difficulty in making accurate discharge measurements.

Observer—Henry Busch, care of Hudson Bay Co's. Lac Seul Post, Sioux Lookout P.O.

Remarks—The very steady regimen of the English River, together with the lack of gauge readers, makes it possible and necessary to apply the gauge heights at Ear Falls to gauges at Manitou and Oak Falls. Gauge readings taken on nearly the same day were used in making up curves for the three stations, and the results obtained justify the assumptions made. No allowance is made for lag. With additional data it may be possible to extend the system to points farther down the river.

Discharge Measurements of English River at Ear Falls in 1917

Date	Hydrographer	Width in Feet	Area of Section in Sq. Feet	Mean Velocity in Feet per Sec.	Gauge Height in Feet	Discharge in Sec-Feet	Discharge in Second-feet per Square Mile
1917							
Feb. 18....	Taylor, J, R.....	328	8,205	.60	118.55	4,866(a)	.....
" 18....	"	328	8,205	.60	118.55	4,923(a)	.....
April 4....	"	326	8,133	.49	118.12	3,985	.....
" 4....	"	326	8,133	.48	118.12	3,904	.....
July 12....	"	331	8,213	.50	118.23	4,107	.....
Oct. 31....	"	332	8,505	.78	119.12	6,634	.....

(a) Ice measurement.

Daily Gauge Height and Discharge of English River at Ear Falls for 1916-7

Drainage Area, 11,700 Square Miles

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge
	Feet	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*
1	.....	.....	.....	.....	119.41	6920	.....	.....	.....	.....	.....	.....	.....	.....	118.00	3700	.....	.....	.....	.....	.....	.....	.....	.....
2	.....	.....	.....	.....	.....	.....	119.12	6190	118.79	5380	118.45	4590	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
3	.....	.....	119.70	8000	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	118.12	3920	118.08	3840	.....	.....	.....	.....	.....	.....	119.39	6920
5	.....	.....	.....	.....	.....	.....	119.12	6190	.....	.....	.....	.....	.....	.....	.....	.....	118.33	4330	.....	.....	.....	.....	119.37	6870
6	.....	.....	.....	.....	119.37	6800	.....	.....	118.70	5160	118.43	4550	118.20	4070	.....	.....	.....	.....	.....	.....	118.95	5760	.....	.....
7	.....	.....	119.70	8000	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	119.34	6920
8	.....	.....	.....	.....	119.37	6800	119.04	5990	.....	.....	.....	.....	.....	.....	118.12	3920	118.29	4250	.....	.....	.....	.....	.....	.....
9	.....	.....	.....	.....	.....	.....	.....	.....	118.66	5070	118.41	4500	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
10	.....	.....	119.62	7680	.....	.....	.....	.....	.....	.....	.....	.....	118.20	4070	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
11	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	118.16	3990	.....	.....	.....	.....	.....	.....	119.41	6980
12	.....	.....	.....	.....	119.33	6690	119.00	5890	.....	.....	.....	.....	.....	.....	.....	.....	118.29	4250	118.23	4130	.....	.....	.....	.....
13	120.16	9840	.....	.....	.....	.....	.....	.....	118.62	4980	118.39	4460	118.20	4070	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
14	.....	.....	119.62	7680	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	118.20	4070	118.24	4150	.....	.....	.....	.....	119.41	6980
15	.....	.....	.....	.....	119.29	6570	.....	.....	.....	.....	118.29	4250	.....	.....	118.20	4070	.....	.....	.....	.....	.....	.....	.....	.....
16	.....	.....	.....	.....	.....	.....	118.95	5760	.....	.....	118.29	4250	.....	.....	.....	.....	118.27	4210	.....	.....	.....	.....	.....	.....
17	120.12	9680	.....	.....	.....	.....	.....	.....	118.54	4790	.....	.....	118.12	3920	.....	.....	118.29	4250	.....	.....	.....	.....	.....	.....
18	.....	.....	119.54	7360	.....	.....	.....	.....	118.55	4820	.....	.....	.....	.....	118.24	4150	.....	.....	.....	.....	119.29	6640	119.43	7030
19	.....	.....	.....	.....	119.29	6570	118.95	5760	.....	.....	.....	.....	.....	.....	.....	.....	118.29	4250	.....	.....	119.29	6640	.....	.....
20	120.04	9360	.....	.....	.....	.....	.....	.....	118.54	4790	118.27	4210	118.04	3770	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
21	.....	.....	119.45	7040	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	118.31	4290	.....	.....	119.45	7090
22	.....	.....	.....	.....	119.24	6430	.....	.....	.....	.....	.....	.....	.....	.....	118.31	4290	.....	.....	118.20	4070	.....	.....	.....	.....
23	.....	.....	.....	.....	.....	.....	118.91	5660	118.50	4700	118.24	4150	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
24	119.95	9000	119.45	7040	.....	.....	.....	.....	.....	.....	.....	.....	118.00	3700	.....	.....	.....	.....	.....	.....	119.37	6870	.....	.....
25	119.87	8680	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	118.29	4250	.....	.....	.....	.....	.....	.....	119.45	7090
26	.....	.....	.....	.....	119.20	6320	118.87	5570	.....	.....	118.20	4070	.....	.....	118.29	4250	.....	.....	118.31	4290	.....	.....	.....	.....
27	119.87	8680	.....	.....	.....	.....	.....	.....	118.47	4630	118.20	4070	117.95	3610	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
28	119.83	8520	119.45	7040	.....	.....	.....	.....	.....	.....	118.20	4070	.....	.....	118.29	4250	.....	.....	.....	.....	.....	.....	.....	.....
29	.....	.....	.....	.....	119.20	6320	.....	.....	.....	.....	.....	.....	.....	.....	118.29	4250	.....	.....	118.62	4980	119.37	6870	119.50	7230
30	.....	.....	.....	.....	.....	.....	118.87	5570	.....	.....	118.20	4070	.....	.....	118.29	4250	.....	.....	.....	.....	.....	.....	.....	.....
31	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	118.20	4070	.....	.....	118.31	4290	.....	.....	118.79	5380	.....	.....	.....	.....

Monthly Discharge of English River at Ear Falls for 1916-7

Drainage Area, 11,700 Square Miles

Month	Discharge in Second-feet			Discharge in Second-feet per Square Mile			Run-off
	Maximum	Minimum	Mean	Maximum	Minimum	Mean	Depth in Inches on Drainage Area
October (1916)	9,840	8,520	9,109	.84	.73	.78	.90
November "	8,000	7,040	7,480	.68	.60	.64	.71
December "	6,920	6,320	6,602	.59	.54	.56	.65
January 1917)	6,190	5,570	5,842	.53	.48	.50	.58
February	5,380	4,630	4,924	.46	.40	.42	.44
March	4,590	4,070	4,255	.39	.35	.36	.42
April	4,070	3,610	3,891	.35	.31	.33	.37
May.....	4,290	3,700	4,112	.37	.32	.35	.40
June.....	4,330	4,150	4,241	.37	.35	.36	.40
July	5,380	4,070	4,523	.46	.35	.39	.45
August	6,870	5,760	6,556	.59	.49	.56	.65
September	7,230	6,870	7,012	.62	.59	.60	.67
The year	9,840	3,610	5,712	.84	.31	.49	6.62

Daily Gauge Height of English River at Lac Seul for 1916-7

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.
1	106.66	105.73	105.08	104.81	104.58	104.28	104.01	103.76	103.97	104.19	104.37	105.16
2	106.77	105.76	105.06	104.81	104.54	104.31	104.01	103.74	103.98	104.11	104.50	105.18
3	106.56	105.68	105.06	104.78	104.53	104.30	103.89	103.76	103.98	104.11	104.45	105.18
4	106.58	105.67	105.03	104.81	104.53	104.28	103.89	103.76	103.95	103.96	104.43	105.18
5	106.61	105.63	105.03	104.79	104.52	104.26	103.85	103.74	103.94	103.81	104.56	105.16
6	106.49	105.61	105.03	104.79	104.50	104.26	103.85	103.74	103.93	103.81	104.60	105.18
7	106.43	105.66	105.03	104.80	104.50	104.24	103.91	103.81	103.91	103.71	104.62	105.20
8	106.33	105.61	105.06	104.78	104.50	104.26	103.90	103.86	103.91	103.81	104.68	105.23
9	106.33	105.59	105.11	104.81	104.49	104.24	103.89	103.86	103.91	103.83	104.77	105.23
10	106.31	105.51	105.03	104.75	104.49	104.21	103.88	103.91	103.96	103.79	104.73	105.25
11	106.29	105.51	105.01	104.77	104.49	104.21	103.88	103.91	103.94	103.81	104.77	105.20
12	106.24	105.51	105.01	104.73	104.44	104.18	103.87	103.94	103.89	103.85	104.77	105.10
13	106.21	105.49	104.93	104.73	104.44	104.18	103.87	103.99	103.89	103.85	104.79	105.14
14	106.21	105.46	104.98	104.74	104.45	104.21	103.86	104.01	103.91	103.85	104.89	105.14
15	106.16	105.47	105.00	104.71	104.41	104.19	103.83	104.03	103.86	103.83	104.89	105.16
16	106.16	105.41	104.96	104.71	104.41	104.12	103.81	104.06	103.96	103.84	104.91	105.16
17	106.13	105.43	104.92	104.70	104.39	104.16	103.80	104.04	103.98	103.83	104.93	105.14
18	106.01	105.35	104.93	104.69	104.40	104.13	103.79	104.09	104.06	103.75	104.95	105.18
19	106.01	105.41	104.91	104.68	104.40	104.13	103.79	104.01	104.11	103.79	104.97	105.18
20	106.01	105.31	104.86	104.66	104.35	104.11	103.81	103.99	104.11	103.81	104.95	105.18
21	106.01	105.31	104.88	104.66	104.36	104.11	103.81	104.01	104.16	103.79	104.93	105.16
22	105.95	105.21	104.86	104.64	104.39	104.09	103.77	104.01	104.13	103.79	104.97	105.14
23	105.91	105.21	104.83	104.61	104.40	104.08	103.78	103.96	104.01	103.79	105.00	105.12
24	105.87	105.20	104.83	104.61	104.36	104.06	103.76	103.96	103.99	103.77	105.08	105.10
25	105.93	105.18	104.81	104.60	104.33	104.07	103.76	103.91	104.01	103.75	105.02	105.10
26	105.83	105.17	104.81	104.58	104.31	104.09	103.78	103.91	104.09	103.91	105.02	105.12
27	105.76	105.17	104.84	104.56	104.32	104.08	103.78	103.93	104.11	103.87	105.12	105.10
28	105.71	105.11	104.87	104.58	104.29	104.05	106.76	103.89	104.11	104.04	105.12	105.12
29	105.78	105.13	104.83	104.61	.....	104.05	103.76	103.96	104.11	104.18	105.10	105.14
30	105.71	105.11	104.85	104.58	.....	104.03	103.74	104.01	104.08	104.33	105.10	105.14
31	105.71	.....	104.83	104.58	.....	104.01	.....	103.98	.....	104.31	105.12	.....

English River at Manitou Falls

Location—About 800 feet above the first chute of the Manitou Falls, and five miles below the mouth of the Mattawa River and the old Mattawa H. B. Co's. Post. Cedar River enters the English River ½ mile below the metering section.

Records Available—Discharge measurements from July, 1914.

Drainage Area—14,600 square miles.

Gauge—Vertical staff with enamelled face screwed to a 6-inch pine post and firmly wedged and wired to the right bank 15 feet south of a 2-inch jack pine, which is used as the initial point for soundings. The zero on the gauge (elev. 89.37) is referred to a bench mark (elev. 100.43) painted on a point of rock 2.5 feet southeast of the initial point.

Channel and Control—About 1,200 feet above the station the channel begins to narrow down and turns to the right out of the lake above. It is comparatively straight thence to the station and falls. Both banks are high, rocky and wooded, and will not overflow. The bed of the stream is rocky and permanent. The current is slow above and moderately swift at the section.

Discharge Measurements—Made from a canoe with a small Price current meter.

Remarks—The very steady regimen of the English River, together with the lack of gauge readers, makes it possible and necessary to apply the gauge heights at Ear Falls to the gauge at Manitou Falls. Gauge readings taken on nearly the same day were used in making up curves for the two stations, and the results obtained justify the assumptions made. No allowance is made for "lag."

Discharge Measurements of English River at Manitou Falls in 1917

Date	Hydrographer	Width in Feet	Area of Section in Sq. Feet	Mean Velocity in Feet per Sec.	Gauge Height in Feet	Discharge in Sec-Feet	Discharge in Second-feet per Square Mile
1917							
Feb. 13....	Taylor, J. R.....	178	3,136	1.93	90.21	6,039(a)	.....
" 13....	"	178	3,136	1.94	90.21	6,088 (a)	.....
July 13....	"	175	3,238	1.65	89.44	5,344	.....

(a) Ice measurement.

Daily Gauge Height and Discharge of English River at Manitou Falls for 1916-7

Drainage Area, 14,600 Square Miles

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge
	Feet	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*
1	.....	.....	.....	.....	92.30	8240	.....	.....	.....	.....	.....	.....	.....	.....	88.61	4330	.....	.....	.....	.....	.....	.....	.....	.....
2	.....	.....	.....	.....	.....	.....	91.54	7520	90.61	6500	89.78	5590	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
3	.....	.....	93.06	9230	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	88.92	4640	88.82	4540	.....	.....	.....	.....	.....	.....	92.24	8340
5	.....	.....	.....	.....	.....	.....	91.54	7520	.....	.....	.....	.....	.....	.....	.....	.....	89.47	5250	.....	.....	.....	.....	92.19	8280
6	.....	.....	.....	.....	92.19	8100	.....	.....	90.44	6310	89.73	5530	89.13	4870	.....	.....	.....	.....	.....	.....	91.10	7040	.....	.....
7	.....	.....	93.06	9230	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	92.74	8340
8	.....	.....	.....	.....	92.19	8100	91.33	7290	.....	.....	.....	.....	.....	.....	88.92	4640	89.36	5130	.....	.....	.....	.....	.....	.....
9	.....	.....	.....	.....	.....	.....	.....	.....	90.34	6200	89.68	5480	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
10	.....	.....	92.85	8950	.....	.....	.....	.....	.....	.....	.....	.....	89.13	4870	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
11	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	89.03	4760	.....	.....	.....	.....	.....	.....	92.30	8410
12	.....	.....	.....	.....	92.09	7970	91.23	7180	.....	.....	.....	.....	.....	.....	.....	.....	89.36	5130	89.21	4960	.....	.....	.....	.....
13	94.40	11110	.....	.....	.....	.....	.....	.....	90.23	6080	89.62	5410	89.13	4870	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
14	.....	.....	92.85	8950	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	89.13	4870	89.23	4980	.....	.....	.....	.....	92.30	8410
15	.....	.....	.....	.....	91.98	7820	.....	.....	.....	.....	89.36	5130	.....	.....	89.13	4870	.....	.....	.....	.....	.....	.....	.....	.....
16	.....	.....	.....	.....	.....	.....	91.09	7030	.....	.....	89.36	5130	.....	.....	.....	.....	89.31	5070	.....	.....	.....	.....	.....	.....
17	94.16	10770	.....	.....	.....	.....	.....	.....	90.02	5850	.....	.....	88.92	4640	.....	.....	89.36	5130	.....	.....	.....	.....	.....	.....
18	.....	.....	92.64	8680	.....	.....	.....	.....	90.05	5890	.....	.....	.....	.....	89.23	4980	.....	.....	.....	.....	91.98	8030	92.35	8470
19	.....	.....	.....	.....	91.98	7820	91.09	7030	.....	.....	.....	.....	.....	.....	.....	.....	89.36	5130	.....	.....	91.98	8030	.....	.....
20	93.95	10480	.....	.....	.....	.....	.....	.....	90.02	5850	89.29	5050	88.71	4430	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
21	.....	.....	92.40	8370	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	89.42	5190	.....	.....	92.41	8540
22	.....	.....	.....	.....	91.85	7560	.....	.....	.....	.....	.....	.....	.....	.....	89.42	5190	.....	.....	89.13	4870	.....	.....	.....	.....
23	.....	.....	.....	.....	.....	.....	90.99	6920	89.92	5740	89.23	4980	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
24	93.72	10160	92.40	8370	.....	.....	.....	.....	.....	.....	.....	.....	88.61	4330	.....	.....	.....	.....	.....	.....	92.19	8280	.....	.....
25	93.50	9850	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	89.36	5130	.....	.....	.....	.....	.....	.....	92.41	8540
26	.....	.....	.....	.....	91.75	7520	90.86	6780	.....	.....	89.13	4870	.....	.....	89.36	5130	.....	.....	89.42	5190	.....	.....	.....	.....
27	93.50	9850	.....	.....	.....	.....	.....	.....	89.81	5620	89.13	4870	88.48	4200	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
28	93.40	9710	92.40	8370	.....	.....	.....	.....	.....	.....	89.13	4870	.....	.....	89.36	5130	.....	.....	.....	.....	.....	.....	.....	.....
29	.....	.....	.....	.....	91.75	7520	.....	.....	.....	.....	.....	.....	.....	.....	89.36	5130	.....	.....	90.23	6080	92.19	8280	92.54	8700
30	.....	.....	.....	.....	.....	.....	90.86	6780	.....	.....	89.13	4870	.....	.....	89.36	5130	.....	.....	.....	.....	.....	.....	.....	.....
31	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	89.13	4870	.....	.....	89.42	5190	.....	.....	90.67	6570	.....	.....	.....	.....

Monthly Discharge of English River at Manitou Falls for 1916-7

Drainage Area, 14,600 Square Miles

Month	Discharge in Second-feet			Discharge in Second-feet per Square Mile			Run-off
	Maximum	Minimum	Mean	Maximum	Minimum	Mean	Depth in Inches on Drainage Area
October (1916)	11,110	9,710	10,276	.76	.67	.70	.81
November "	9,230	8,370	8,769	.63	.57	.60	.67
December "	8,240	7,520	7,850	.56	.51	.54	.62
January (1917)	7,520	6,780	7,117	.51	.46	.49	.56
February	6,500	5,620	6,004	.45	.38	.41	.43
March	5,590	4,870	5,127	.38	.33	.35	.40
April	4,870	4,200	4,606	.33	.29	.32	.36
May	5,190	4,330	4,930	.36	.30	.34	.39
June	5,250	4,980	5,117	.36	.34	.35	.39
July	6,570	4,870	5,477	.45	.33	.38	.44
August	8,280	7,040	7,932	.57	.48	.54	.62
September	8,700	8,280	8,448	.60	.57	.58	.65
The year	11,110	4,200	6,804	.76	.29	.47	6.33

English River near Oak Falls

Location—About one mile above the upper Oak Fall, just above Little Rapids, and about one-half mile below Wilcox Lake, District of Kenora.

Records Available—Discharge measurements from August, 1914.

Drainage Area—15,570 square miles.

Gauge—Vertical staff with enamelled face screwed to a cedar post and firmly wedged in rock on the right bank 200 feet above the metering section. The zero on the gauge (elev. 194.12) is referred to a bench mark (elev. 200.00) painted on a rock in the river near the right bank and 20 feet above the final point for soundings. The initial point for soundings is located on the left bank, and consists of the head of a nail driven in the side of a 12-inch poplar blazed and marked I.P., N. 70° W.

Channel and Control—Straight for about 300 feet above and ½ mile below the station. Both banks are high, rocky and wooded, and not liable to overflow. The bed of the stream is rocky and practically permanent. The current is sluggish above and moderately swift below the station, a small rapid existing about 800 feet below.

Discharge Measurements—Made from a canoe with a small Price current meter.

Remarks—The very steady regimen of the English River, together with the lack of gauge readers, makes it possible and necessary to apply the gauge heights at Ear Falls to the gauge at Oak Falls. Gauge readings taken on nearly the same day were used in making up curves for the two stations, and the results obtained justify the assumptions made. No allowance is made for "lag."

Discharge Measurements of English River near Oak Falls in 1917

Date	Hydrographer	Width in Feet	Area of Section in Sq. Feet	Mean Velocity in Feet per Sec.	Gauge Height in Feet	Discharge in Sec-Feet	Discharge in Second-feet per Square Mile
1917							
Feb. 10....	Taylor, J. R....	375	6,160	1.05	195.46	6,486 (a)	.....
" 10....	" "	375	6,160	1.06	195.46	6,547 (a)	.....
July 15....	" "	375	6,236	.97	195.05	6,049	.....

(a) Ice measurement.

Daily Gauge Height and Discharge of English River near Oak Falls for 1916-7

Drainage Area, 15,570 Square Miles

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge
	Feet	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*
1	.....	.....	.....	.....	196.29	8820	.....	.....	.....	.....	.....	.....	.....	.....	194.42	4980	.....	.....	.....	.....	.....	.....	.....	.....
2	.....	.....	.....	.....	.....	.....	195.91	7840	195.48	6880	195.02	6000	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
3	.....	.....	196.68	9990	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	196.27	8760
4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	194.59	5230	194.53	5140	.....	.....	.....	.....	.....	.....	196.24	8670
5	.....	.....	.....	.....	.....	.....	195.91	7840	.....	.....	.....	.....	.....	.....	.....	.....	194.86	5710	.....	.....	.....	.....	.....	.....
6	.....	.....	.....	.....	196.24	8670	.....	.....	195.35	6620	195.00	5960	194.69	5400	.....	.....	.....	.....	.....	.....	195.68	7280	.....	.....
7	.....	.....	196.68	9990	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	196.27	8760
8	.....	.....	.....	.....	196.24	8670	195.80	7620	.....	.....	.....	.....	.....	.....	194.59	5230	194.81	5620	.....	.....	.....	.....	.....	.....
9	.....	.....	.....	.....	.....	.....	.....	.....	195.30	6520	194.97	5910	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
10	.....	.....	196.58	9690	.....	.....	.....	.....	.....	.....	.....	.....	194.69	5400	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
11	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	194.64	5320	.....	.....	.....	.....	.....	.....	196.29	8820
12	.....	.....	.....	.....	196.19	8520	195.75	7520	.....	.....	.....	.....	.....	.....	.....	.....	194.81	5620	194.73	5470	.....	.....	.....	.....
13	197.29	11860	.....	.....	.....	.....	.....	.....	195.23	6380	194.95	5870	194.69	5400	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
14	.....	.....	196.58	9690	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	194.69	5400	194.74	5490	.....	.....	.....	.....	196.29	8820
15	.....	.....	.....	.....	196.14	8400	.....	.....	.....	.....	194.81	5620	.....	.....	194.69	5400	.....	.....	.....	.....	.....	.....	.....	.....
16	.....	.....	.....	.....	.....	.....	195.68	7280	.....	.....	194.81	5620	.....	.....	.....	.....	194.78	5560	.....	.....	.....	.....	.....	.....
17	197.24	11690	.....	.....	.....	.....	.....	.....	195.14	6210	.....	.....	194.59	5230	.....	.....	194.81	5620	.....	.....	.....	.....	.....	.....
18	.....	.....	196.47	9360	.....	.....	.....	.....	195.15	6230	.....	.....	.....	.....	194.74	5490	.....	.....	.....	.....	196.14	8400	196.32	8910
19	.....	.....	.....	.....	196.14	8400	195.68	7280	.....	.....	.....	.....	.....	.....	.....	.....	194.81	5620	.....	.....	196.14	8400	.....	.....
20	197.13	11340	.....	.....	.....	.....	.....	.....	195.14	6210	194.78	5560	194.48	5070	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
21	.....	.....	196.35	9000	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	194.83	5650	.....	.....	196.35	9000
22	.....	.....	.....	.....	196.07	8220	.....	.....	.....	.....	.....	.....	.....	.....	194.83	5650	.....	.....	194.69	5400	.....	.....	.....	.....
23	.....	.....	.....	.....	.....	.....	195.63	7180	195.09	6120	194.74	5490	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
24	197.02	11010	196.35	9000	.....	.....	.....	.....	.....	.....	.....	.....	194.42	4980	.....	.....	.....	.....	.....	.....	196.24	8670	.....	.....
25	196.91	10680	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	194.81	5620	.....	.....	.....	.....	.....	.....	196.35	9000
26	.....	.....	.....	.....	196.02	8220	195.59	7100	.....	.....	194.69	5400	.....	.....	194.81	5620	.....	.....	194.83	5650	.....	.....	.....	.....
27	196.91	10680	.....	.....	.....	.....	.....	.....	195.05	6050	194.69	5400	194.35	4880	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
28	196.85	10500	196.35	9000	.....	.....	.....	.....	.....	.....	194.69	5400	.....	.....	194.81	5620	.....	.....	.....	.....	.....	.....	.....	.....
29	.....	.....	.....	.....	196.02	8100	.....	.....	.....	.....	.....	.....	.....	.....	194.81	5620	.....	.....	195.25	6420	196.24	8670	196.42	9210
30	.....	.....	.....	.....	.....	.....	195.59	7100	.....	.....	194.69	5400	.....	.....	194.81	5620	.....	.....	.....	.....	.....	.....	.....	.....
31	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	194.69	5400	.....	.....	194.83	5650	.....	.....	195.48	6880	.....	.....	.....	.....

Monthly Discharge of English River near Oak Falls for 1916-7

Drainage Area, 15,570 Square Miles

Month	Discharge in Second-feet			Discharge in Second-feet per Square Mile			Run-off
	Maximum	Minimum	Mean	Maximum	Minimum	Mean	Depth in Inches on Drainage Area
October... (1916)	11,860	10,500	11,109	.76	.67	.71	.82
November "	9,990	9,000	9,465	.64	.58	.61	.68
December "	8,820	8,100	8,447	.57	.52	.54	.62
January ...(1917)	7,840	7,100	7,418	.50	.46	.48	.55
February .. "	6,880	6,050	6,358	.44	.39	.41	.43
March ..... "	6,000	5,400	5,618	.39	.35	.36	.42
April. ..... "	5,400	4,880	5,199	.35	.31	.33	.37
May..... "	5,650	4,980	5,454	.36	.32	.35	.40
June..... "	5.710	5.490	5,606	.37	.35	.36	.40
July ..... "	6,880	5,400	5,912	.44	.35	.38	.44
August .... "	8,670	7,280	8,284	.56	.47	.53	.61
September. "	9,210	8,670	8,883	.59	.56	.57	.64
The year.....	11,860	4,880	7,313	.76	.31	.47	6.38

Footprint River at Rainy Lake Falls

Location—100 feet above the crest of the lowest fall, at the mouth of the Footprint River where it flows into the north-west bay of Rainy Lake, on Indian Reserve 17A, District of Rainy River.

Records Available—Monthly discharge measurements from July, 1914. Daily gauge heights, Sept. 18, 1914, to June 30, 1917.

Drainage Area—590 square miles.

Gauge—Vertical steel staff gauge, graduated in feet and inches. The zero on the gauge (elevation 101.30) is referred to a bench mark (elevation 110.51) painted on the ledge of a rock on right bank.

Channel—About 40 feet above the station the channel curves to the left and then runs straight for about 140 feet, dropping into Rainy Lake. The banks are high, rocky, wooded, and not liable to overflow. The right bank has been burnt over. The bed of the river contains large boulders, and one channel exists at all stages.

Discharge Measurements—Made from a canoe and wading with a small Price current meter.

Winter Flow—Relation of gauge height to discharge not affected by ice.

Regulation—Occasional operations of the dam at Footprint Lake cause fluctuations in the river at the gauge.

Accuracy—The rating curve is well defined. Open water curve used throughout the year.

Manitou River at Devil's Cascades

Location—About 150 feet above the old dam, at the head of the Devil's Cascades, Rainy River District.

Records Available—Discharge measurements from July, 1914. Daily gauge heights, July 15, 1914, to June 30, 1916.

Drainage Area—435 square miles.

Gauge—An inclined steel staff, graduated in feet and inches, and located on the face of the old dam. The zero of the gauge is at an elevation of 139.38 feet referred to a bench mark (elevation 147.37) painted on a rock 1 foot east of the initial point for soundings.

Channel—Straight for about 150 feet above and 400 feet below the station. The right bank is high, rocky, wooded, and not liable to overflow, but the left bank is low and wooded, with a gradually rising bank, which is not liable to overflow unless the dam is operated. The bed of the stream is composed of rock, and the current is slow, one channel existing at all stages.

Discharge Measurements—Made from canoe or ice with a small Price current meter.

Winter Flow—The relation of gauge height to discharge is affected by ice during the cold period, and measurements are made to determine the winter flow.

Regulation—Several dams exist on the river between the section and Manitou Lake, which are not in operation at present. The operation of the dam just above the station causes fluctuations at the gauge.

Accuracy—A fairly well-defined rating curve has been developed, and records are considered fair.

Seine River at Skunk Rapids

Location—About 200 feet above Skunk Rapids, and 1 mile upstream from the Canadian Northern Ry. bridge. One-half mile north of the C. N. Ry. tracks, and 1 mile west of La Seine Station, in the District of Rainy River.

Records Available—Discharge measurements from August, 1914.

Drainage Area—2,300 square miles.

Gauge—Vertical steel staff gauge with enamelled face, graduated in feet and inches, and located near La Seine station, on the C. N. Ry. The zero on the gauge is at an elevation of 1,138.08 feet, which is referred to a bench mark (elevation 1,152.73) painted on a large boulder, on the right bank of the river, 6 feet from a 6-inch poplar tree used as a final point for soundings. The initial point is on the left bank and consists of a 2-inch spruce tree, blazed and marked I.P. with white paint. "H. E. P. Comm." is painted on the rock directly below the spruce tree.

Channel and Control—Straight for about 500 feet above and 200 feet below the station to the rapids. The right bank of the river curves into a point at the rapids forming a narrow channel. The velocity of the river is slow and the banks are high, rocky and wooded. This land has been burnt over, but most of the trees are still standing. The bed of the stream is sandy and clean, with a few boulders near the right bank. One channel exists at all stages.

Discharge Measurements—Made from a canoe with a small Price current meter.

Winter Flow—The relation of gauge height to discharge is affected by ice during the winter months and measurements are made to determine the winter flow.

Accuracy—Open water rating curve is fairly well defined and estimates are considered good.

Observer—

Discharge Measurements of Seine River at Skunk Rapids in 1917

Date	Hydrographer	Width in Feet	Area of Section in Sq. Feet	Mean Velocity in Feet per Sec.	Gauge Height in Feet	Discharge in Sec-Feet	Discharge in Second-feet per Square Mile
1917 Aug. 27....	Taylor, J. R....	186	1,903	.54	1146.86	1,028	.....

Daily Gauge Height and Discharge of Seine River at Skunk Rapids for 1916-7

Drainage Area, 2,300 Square Miles

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge
	Feet	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*
1	1148.21	1870	1147.79	1550	1146.88	820	1146.77	680	1146.38	525	1145.67	303	1145.59	337	1146.38	725	1148.56	2180	1148.33	1980	1147.37	1260	1147.41	1280
2	1148.21	1870	1147.79	1550	1146.87	815	1146.77	680	1146.29	491	1145.67	303	1145.59	337	1146.42	745	1148.67	2280	1148.33	1980	1147.37	1260	1147.37	1260
3	1148.21	1870	1147.79	1550	1146.86	810	1146.77	680	1146.25	478	1145.67	303	1145.59	337	1146.46	760	1148.72	2330	1148.28	1930	1147.33	1230	1147.33	1230
4	1148.19	1860	1147.79	1550	1146.86	810	1146.77	680	1146.25	478	1145.67	303	1145.59	427	1146.46	760	1148.78	2390	1148.24	1900	1147.37	1260	1147.31	1220
5	1148.11	1790	1147.73	1500	1146.86	810	1146.77	680	1146.21	464	1145.67	303	1145.59	427	1146.46	760	1148.80	2410	1148.20	1860	1147.36	1250	1147.27	1200
6	1148.05	1740	1147.77	1530	1146.83	795	1146.75	670	1146.21	464	1145.67	303	1145.59	427	1146.54	800	1148.87	2480	1148.16	1830	1147.36	1250	1147.25	1180
7	1148.04	1740	1147.81	1560	1146.83	795	1146.75	670	1146.00	400	1145.67	303	1145.59	427	1146.59	825	1148.87	2480	1148.16	1830	1147.32	1230	1147.20	1160
8	1148.04	1740	1147.86	1600	1146.81	785	1146.75	670	1145.96	388	1145.67	303	1145.59	427	1146.59	825	1148.80	2410	1147.94	1660	1147.32	1230	1147.16	1130
9	1148.04	1740	1147.88	1620	1146.81	785	1146.74	665	1145.96	388	1145.67	303	1145.59	427	1146.63	845	1148.78	2390	1147.94	1660	1147.28	1200	1147.16	1130
10	1148.04	1740	1147.81	1560	1146.81	785	1146.73	660	1145.94	382	1145.67	303	1145.59	427	1146.63	845	1148.77	2380	1147.90	1630	1147.28	1200	1147.12	1110
11	1148.04	1740	1147.77	1530	1146.79	775	1146.71	655	1145.94	382	1145.63	293	1145.59	427	1146.63	845	1148.73	2340	1147.86	1600	1147.28	1200	1147.08	1080
12	1148.02	1720	1147.50	1340	1146.79	775	1146.67	640	1145.92	376	1145.63	293	1145.59	427	1146.63	845	1148.67	2280	1147.86	1600	1147.27	1200	1147.08	1080
13	1148.00	1700	1147.33	1230	1146.79	775	1146.65	630	1145.92	376	1145.63	293	1145.59	427	1146.71	885	1148.59	2210	1147.86	1600	1147.22	1170	1146.87	970
14	1147.98	1690	1147.11	1100	1146.77	765	1146.65	630	1145.92	376	1145.63	293	1145.59	427	1146.79	925	1148.54	2160	1147.86	1600	1147.22	1170	1146.83	945
15	1147.96	1680	1147.00	1040	1146.77	765	1146.63	620	1145.90	370	1145.63	293	1145.56	418	1146.83	945	1148.52	2140	1147.85	1590	1147.18	1140	1146.79	925
16	1147.96	1680	1146.96	1020	1146.75	760	1146.63	620	1145.88	364	1145.63	293	1145.56	418	1146.88	975	1148.46	2090	1147.81	1560	1147.18	1140	1146.79	925
17	1147.94	1660	1146.96	1020	1146.74	755	1146.63	620	1145.88	364	1145.63	293	1145.63	439	1146.96	1020	1148.43	2060	1147.81	1560	1147.18	1140	1146.79	925
18	1147.94	1660	1146.96	1020	1146.73	750	1146.59	605	1145.88	364	1145.63	293	1145.67	451	1147.21	1160	1148.37	2010	1147.76	1520	1147.18	1140	1146.75	905
19	1147.96	1680	1146.92	995	1146.71	740	1146.59	605	1145.88	364	1145.63	293	1145.67	451	1147.29	1210	1148.35	1990	1147.72	1500	1147.13	1110	1146.75	905
20	1147.96	1680	1146.92	995	1146.70	735	1146.56	595	1145.88	364	1145.59	283	1145.71	464	1147.38	1260	1148.43	2060	1147.68	1470	1147.13	1110	1146.75	905
21	1147.96	1680	1146.92	995	1146.69	730	1146.56	595	1145.88	364	1145.59	283	1145.71	464	1147.44	1300	1148.49	2120	1147.64	1440	1147.09	1090	1146.79	925
22	1147.96	1680	1146.92	995	1146.67	720	1146.54	585	1145.83	349	1145.59	283	1145.79	491	1147.54	1370	1148.49	2120	1147.59	1400	1147.09	1090	1146.79	925
23	1147.96	1680	1146.92	995	1146.67	720	1146.54	585	1145.83	349	1145.59	283	1145.88	525	1147.59	1400	1148.41	2040	1147.59	1400	1147.21	1160	1146.79	925
24	1147.90	1630	1146.92	995	1146.67	720	1146.53	580	1145.79	337	1145.59	283	1145.96	555	1147.63	1430	1148.34	1980	1147.55	1380	1147.32	1230	1146.75	905
25	1147.81	1560	1146.90	985	1146.67	720	1146.52	580	1145.75	325	1145.59	283	1146.00	570	1147.71	1490	1148.34	1980	1147.55	1380	1147.34	1240	1146.75	905
26	1147.79	1550	1146.90	985	1146.67	720	1146.51	575	1145.75	325	1145.59	283	1146.00	570	1147.73	1500	1148.32	1970	1147.55	1380	1147.33	1230	1146.79	925
27	1147.79	1550	1146.88	975	1146.67	720	1146.50	570	1145.75	325	1145.59	283	1146.00	570	1147.81	1560	1148.25	1910	1147.51	1350	1147.33	1230	1146.79	925
28	1147.79	1550	1146.88	975	1146.67	720	1146.46	555	1145.75	325	1145.59	283	1146.00	570	1147.90	1630	1148.34	1980	1147.46	1310	1147.33	1230	1146.83	945
29	1147.77	1530	1146.88	975	1146.67	720	1146.44	545	.....	....	1145.59	283	1146.21	655	1148.09	1780	1148.34	1980	1147.45	1310	1147.37	1260	1146.83	945
30	1147.77	1530	1146.88	975	1146.66	715	1146.42	540	.....	....	1145.59	283	1146.21	655	1148.27	1920	1148.34	1980	1147.45	1310	1147.39	1270	1146.83	945
31	1147.79	1550	.....	....	1146.65	710	1146.40	530	.....	....	1145.59	283	.....	....	1148.42	2050	.....	....	1147.41	1280	1147.41	1280	.....	....

Monthly Discharge of Seine River at Skunk Rapids for 1916-7

Drainage Area, 2,300 Square Miles

Month	Discharge in Second-feet			Discharge in Second-feet per Square Mile			Run-off
	Maximum	Minimum	Mean	Maximum	Minimum	Mean	Depth in Inches on Drainage Area
October (1916)	1,870	1,530	1,688	.81	.67	.73	.84
November "	1,620	975	1,224	.70	.42	.53	.59
December "	820	710	759	.36	.31	.33	.38
January.. (1917)	680	530	619	.30	.23	.27	.31
February	525	325	388	.23	.14	.17	.18
March	303	283	292	.13	.12	.13	.15
April	655	337	466	.28	.15	.20	.22
May	2,050	725	1,142	.89	.32	.50	.58
June	2,480	1,910	2,171	1.08	.83	.94	1.05
July.....	1,980	1,280	1,574	.86	.56	.68	.78
August	1,280	1,090	1,200	.56	.47	.52	.60
September.....	1,280	905	1,025	.56	.39	.45	.50
The year	2,480	283	1,049	1.08	.12	.46	6.19

Turtle River at Mountain Rapids

Location—About 300 feet above Mountain Rapids, and about 8 miles from the Olive Mine, 12 miles from Mine Centre, which is on the C. N. Ry., in the Rainy River District.

Records Available—Monthly discharge measurements from August, 1914. Daily gauge heights from August 9, 1914.

Drainage Area—1,760 square miles.

Gauge—Vertical steel staff gauge with enamelled face, graduated in feet and inches, and fastened on a crib pier at the C. N. Ry. saw mill, 12 miles from the station. The gauge is located 1,000 feet south of the mouth of Little Turtle River, on the east shore of Little Turtle Lake. Zero on gauge (elevation 82.99) is referred to a bench mark established on a rock with white paint, on the left bank of the river, four feet south of a blazed pine tree, marked I.P. with white paint, which is used as the initial point for soundings. The elevation of this bench mark is 96.00, which is referred to another bench mark (assumed elevation 100.00) established on a rock with white paint, 35 feet north-east of the gauge, at the C. N. Ry. Mill at Mine Centre.

Channel and Control—Straight for about 1,000 feet above and below the station, the water running slowly. The banks are high, wooded and rocky. The bed of the stream is sandy and clean, one channel existing at all stages. The river is used extensively for log driving, and the log jams in Otter Falls affect the section somewhat.

Discharge Measurements—Made from a canoe with a small Price current meter.

Winter Flow—The relation of gauge height to discharge is seriously affected by ice and measurements are made during the winter to determine the flow.

Accuracy—Open water rating curve fairly well defined between gauge heights 91.50 and 94.50. The relation of gauge height to discharge during the log-driving period is affected by back water from log jams.

Observer—Hiram Smith, Mine Centre.

Discharge Measurement of Turtle River at Mountain Rapids in 1917

Date	Hydrographer	Width in Feet	Area of Section in Sq. Feet	Mean Velocity in Feet per Sec.	Gauge Height in Feet	Discharge in Sec-Feet	Discharge in Second-feet per Square Mile
1917 June 7....	Taylor, J. R....	168	2,915	.39	92.25	1,137	.....

Daily Gauge Height and Discharge of Turtle River at Mountain Rapids for 1916-7

Drainage Area, 1,760 Square Miles.

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge
	Feet	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*
1	94.00	2190	92.65	1060	92.43	910	91.97	545	91.72	457	91.62	422	91.49	755	93.37	1750	92.84	1420	91.55	780	91.43	730	92.42	1190
2	93.95	2150	92.69	1080	92.41	855	91.97	545	91.70	450	91.62	422	91.49	755	93.53	1850	92.81	1400	91.69	845	91.46	740	92.43	1200
3	93.90	2120	92.70	1080	92.39	800	91.95	540	91.70	450	91.62	422	91.49	755	93.70	1970	92.74	1360	91.75	870	91.48	750	92.46	1210
4	93.83	2060	92.70	1080	92.37	745	91.95	540	91.70	450	91.62	422	91.49	755	93.78	2030	92.69	1330	91.78	885	91.38	705	92.45	1200
5	93.74	2000	92.70	1080	92.37	705	91.93	530	91.70	450	91.60	415	91.47	745	93.91	2120	92.65	1310	91.74	870	91.30	675	92.47	1220
6	93.67	1950	92.70	1080	92.33	685	91.93	530	91.70	450	91.57	404	91.47	745	94.01	2200	92.62	1300	91.73	865	91.22	645	92.49	1220
7	93.62	1910	92.76	1110	92.37	705	91.91	525	91.70	450	91.57	404	91.45	740	94.10	2270	92.63	1300	91.71	855	91.18	625	92.49	1220
8	93.57	1880	92.97	1220	92.37	705	91.91	525	91.68	443	91.57	404	91.45	740	94.18	2330	92.66	1320	91.69	845	91.11	600	92.50	1230
9	93.50	1830	93.05	1260	92.35	695	91.89	515	91.68	443	91.55	398	91.47	745	94.20	2350	92.64	1310	91.66	830	91.09	590	92.51	1240
10	93.41	1770	93.14	1310	92.33	685	91.89	515	91.66	436	91.55	398	91.47	745	94.20	2350	92.61	1290	91.60	805	91.12	605	92.51	1240
11	93.34	1730	93.20	1340	92.30	675	91.89	515	91.66	436	91.53	390	91.49	755	94.20	2350	92.57	1270	91.64	825	91.13	605	92.51	1240
12	93.29	1690	93.14	1310	92.28	665	91.89	515	91.64	429	91.53	390	91.53	775	94.20	2350	92.55	1260	91.59	800	91.28	665	92.49	1220
13	93.23	1650	93.12	1300	92.24	650	91.89	515	91.64	429	91.53	390	91.53	775	94.19	2340	92.48	1220	91.57	790	91.32	685	92.51	1240
14	93.15	1600	93.08	1270	92.22	645	91.87	510	91.62	422	91.53	390	91.57	790	94.15	2310	92.42	1190	91.55	780	91.24	650	92.49	1220
15	93.10	1580	93.02	1240	92.20	635	91.85	505	91.62	422	91.55	398	91.62	815	94.12	2290	92.39	1180	91.47	745	91.18	625	92.49	1220
16	93.05	1540	92.98	1220	92.20	635	91.83	495	91.62	422	91.55	433	91.64	825	94.08	2250	92.31	1140	91.40	715	91.13	605	92.49	1220
17	92.95	1480	92.95	1200	92.18	625	91.83	495	91.62	422	91.55	468	91.68	840	94.04	2220	92.21	1080	91.34	690	91.21	640	92.48	1220
18	92.90	1460	92.92	1190	92.12	605	91.80	485	91.62	422	91.53	495	91.70	850	93.99	2180	92.17	1060	91.30	675	91.28	665	92.46	1210
19	92.89	1450	92.87	1160	92.12	605	91.80	485	91.62	422	91.53	530	91.78	885	93.94	2140	92.12	1040	91.24	650	91.35	695	92.44	1200
20	92.89	1450	92.78	1120	92.12	605	91.80	485	91.62	422	91.53	565	91.87	925	93.89	2110	92.04	1000	91.20	635	91.35	695	92.42	1190
21	92.90	1460	92.78	1120	92.10	595	91.80	485	91.62	422	91.53	565	91.99	980	93.80	2040	91.94	960	91.16	620	91.42	725	92.41	1180
22	92.88	1440	92.70	1080	92.07	585	91.78	478	91.64	429	91.51	560	92.24	1100	93.75	2000	91.87	925	91.14	610	91.46	740	92.41	1180
23	92.84	1420	92.70	1080	92.05	575	91.78	478	91.64	429	91.51	560	92.28	1120	93.66	1940	91.80	895	91.08	585	91.51	765	92.41	1180
24	92.81	1400	92.66	1060	92.03	565	91.78	478	91.64	429	91.51	560	92.37	1160	93.57	1880	91.76	875	91.02	565	91.60	805	92.41	1180
25	92.62	1300	92.62	1040	92.03	565	91.78	478	91.62	422	91.51	560	92.53	1250	93.48	1820	91.72	860	90.94	535	91.71	855	92.41	1180
26	92.56	1260	92.57	1020	92.03	565	91.76	471	91.62	422	91.51	560	92.62	1300	93.42	1780	91.70	850	90.94	535	91.83	910	92.41	1180
27	92.55	1260	92.53	1000	92.03	565	91.76	471	91.62	422	91.49	550	92.78	1380	93.30	1700	91.65	830	90.91	525	92.02	995	92.44	1200
28	92.54	1250	92.49	980	92.03	565	91.76	471	91.62	422	91.49	550	92.91	1460	95.18	1620	91.64	825	90.97	545	92.16	1060	92.47	1220
29	92.53	1250	92.47	970	92.01	560	91.76	471	.....	....	91.49	550	93.07	1560	93.05	1540	91.59	800	91.16	620	92.22	1090	92.47	1220
30	92.53	1250	92.45	960	92.01	560	91.74	464	.....	.....	91.47	545	93.24	1660	92.96	1490	91.55	780	91.24	650	92.26	1110	92.43	1200
31	92.60	1280	.....	.....	91.99	550	91.74	464	.....	.....	91.49	550	.....	.....	92.87	1440	.....	.....	91.33	685	92.37	1160	.....	.....

Monthly Discharge of Turtle River at Mountain Rapids for 1916-7

Drainage Area, 1,760 Square Miles

Month	Discharge in Second-feet			Discharge in Second-feet per Square Mile			Run-off
	Maximum	Minimum	Mean	Maximum	Minimum	Mean	Depth in Inches on Drainage Area
October (1916)	2,190	1,250	1,615	1.24	.71	.92	1.06
November "	1,340	960	1,134	.76	.55	.64	.71
December "	910	550	648	.52	.31	.37	.43
January (1917)	545	464	501	.31	.26	.28	.32
February	457	422	433	.26	.24	.25	.26
March	565	398	473	.32	.23	.27	.31
April	1,660	740	956	.94	.42	.54	.60
May	2,350	1,440	2,033	1.34	.82	1.16	1.34
June	1,420	780	1,113	.81	.44	.63	.70
July	885	525	717	.50	.30	.41	.47
August	1,160	590	755	.66	.34	.43	.50
September	1,240	1,180	1,209	.70	.67	.69	.77
The year	2,350	398	968	1.34	.23	.55	7.47

Wabigoon River near Quibell

Location—About 200 feet above the second fall from the G.T.P. Railway bridge, and ½ mile below the bridge which spans the first fall. One mile east from Quibell Station, Township of Wabigoon, District of Kenora.

Records Available—Discharge measurements from June, 1914.

Drainage Area—2,400 square miles.

Gauge—Vertical staff with enamelled face screwed to a 5-inch hewn spruce post firmly wedged and braced to the rock on the right bank of the river 1,200 feet above the metering station. The zero on the gauge (elev. 1,061.64) is referred to a bench mark (elev. 1,069.46, G.T.P. datum) painted on a point of rock just below the gauge. The initial point for soundings is a spike driven in the rock on the left bank.

Channel and Control—1,200 feet above the station the channel takes a sharp bend to the right, thence running comparatively straight to the station and falls. The water is sluggish above and moderately swift at the station. The banks are high, rocky and wooded. The bed of the stream is full of boulders and crevices. One channel exists at all stages.

Discharge Measurements—Made from canoe and ice with a small Price current meter.

Regulation—The Dryden Timber and Power Company operate a plant on the Wabigoon River at Dryden, which runs 24 hours per day with the exception of Sundays and holidays.

Winter Flow—Ice formation is very heavy here, and the winter flow is somewhat disturbed by it.

Accuracy—Rating curve fairly well defined, and estimates for open water flow only have been made.

Observer—D. C. Warner, Quibell.

Daily Gauge Height and Discharge of Wabigoon River near Quibell for 1916-7

Drainage Area, 2,400 Square Miles

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge
	Feet	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*
1	1065 29	....	1064.33	....	1063.99	....	1063.89	No winter measurement—hence no attempt has been made to estimate discharge.	1063.97	....	1064.02	....	1063.37	....	1066.04	2450	1064.16	1340	1063.24	875	1064.10	1310	1063.33	915
2	1065.33	....	1064.37	....	1063.97	....	1063.95		1064.02	....	1063.99	....	1063.37	....	1066.04	2450	1064.10	1310	1063.24	875	1064.08	1300	1063.29	895
3	1065.79	....	1065.02	....	1063.97	....	1063.95		1064.04	....	1063.99	....	1063.39	....	1066.05	2450	1064.04	1280	1063.22	865	1064.06	1290	1063.26	880
4	1066 10	....	1065.31	....	1063.95	....	1063.93		1064.04	....	1063.97	....	1063.37	....	1066.06	2460	1063.97	1240	1063 24	875	1064.02	1270	1063.24	875
5	1066.20	....	1065.81	....	1063.93	....	1063.91		1064.06	....	1063.95	....	1063.35	....	1066.14	2510	1063.93	1220	1063.26	880	1063.97	1240	1063.22	865
6	1066.24	....	1066.22	....	1063.91	....	1063.93		1064.12	....	1063.93	....	1063.33	....	1066.16	2520	1063.93	1220	1063.29	895	1063.81	1160	1063.20	855
7	1066.43	....	1066.47	....	1063.91	....	1063.91		1064.10	....	1063.91	....	1063.31	....	1066.18	2540	1063.83	1170	1063.24	875	1063.72	1110	1063.18	845
8	1066.41	....	1066.56	....	1063.97	....	1063.89		1064.06	....	1063.89	....	1063.29	....	1066.20	2550	1063.81	1160	1063.22	865	1063.68	1090	1063.14	830
9	1066.39	....	1066.62	....	1063.99	....	1063.81		1064.02	....	1063.81	....	1063.26	....	1066.24	2580	1063.76	1130	1063.20	855	1063.64	1070	1063.12	820
10	1066.06	....	1066.81	....	1063.99	....	1063. 83		1063.99	....	1063.76	....	1063.29	....	1066.31	2620	1063.72	1110	1063.16	835	1063.60	1050	1063.08	800
11	1065.68	....	1066.79	....	1064.02	....	1063.81		1063.97	....	1063.72	....	1063.29	....	1066.24	2580	1063.68	1090	1063.14	830	1063.47	985	1063.04	785
12	1065.33	....	1066.56	....	1064.02	....	1063.87		1063.95	....	1063.68	....	1063.31	....	1066.22	2560	1063.64	1070	1063.12	820	1063.45	975	1063.02	775
13	1064.97	....	1066.35	....	1064.02	....	1063.85		1063.93	....	1063.64	....	1063.31	....	1066.14	2510	1063.60	1050	1063.10	810	1063.43	965	1062.99	760
14	1064.83	....	1066.24	....	1064.04	....	1063.66		1063.91	....	1063.60	....	1063.33	....	1066.06	2460	1063.58	1040	1063.08	800	1063.41	955	1062.97	750
15	1064.56	....	1066.20	....	1064.02	....	1063.66		1063.89	....	1063.54	....	1063.33	....	1065.97	2400	1063.56	1030	1063.06	790	1063.37	935	1063.04	785
16	1064.47	....	1066.16	....	1064.02	....	1063.68		1063.87	....	1063.49	....	1063.35	....	1065.89	2350	1063.56	1030	1063.06	790	1063.35	925	1062.93	735
17	1064.43	....	1066.10	....	1063.99	....	1063.68		1063.85	....	1063.45	....	1063.37	....	1065.89	2350	1063.56	1030	1063.08	800	1063.33	915	1062.91	725
18	1064.41	....	1065.99	....	1063.99	....	1063.70		1063.83	....	1063.41	....	1063.39	....	1065.87	2340	1063.52	1010	1063.08	800	1063.31	905	1062.89	715
19	1064.37	....	1065.93	....	1063.99	....	1063.70		1063.81	....	1063.37	....	1063.56	....	1065.81	2310	1063.49	995	1063.06	790	1063.29	895	1062.87	710
20	1064.35	....	1065.85	....	1063 97	....	1063.72		1063.81	....	1063.35	....	1063.83	....	1065.81	2310	1063.45	975	1063.04	785	1063.29	895	1062.87	710
21	1064.33	....	1065.83	....	1063.99	....	1063.76		1063.83	....	1063.35	....	1063.85	....	1065.79	2290	1063.43	965	1063.02	775	1063.20	855	1062.89	715
22	1064.33	....	1065.79	....	1063.97	....	1063.81		1063.87	....	1063.33	....	1063.97	....	1065.76	2280	1063.41	955	1062.99	760	1063.18	845	1062.91	725
23	1064.31	....	1065.39	....	1063.97	....	1063.83		1063.89	....	1063.33	....	1063.99	....	1065.74	2260	1063.39	945	1062.99	760	1063.16	835	1062.93	735
24	1064.29	....	1064.99	....	1063.95	....	1063.85		1063.93	....	1063.31	....	1064.04	....	1065.72	2250	1063.37	935	1062.97	750	1063.16	835	1062.96	740
25	1064.29	....	1064.66	....	1063.93	....	1063.83		1063.95	....	1063.31	....	1064.72	....	1065.56	2160	1063.35	925	1063.02	775	1063.14	830	1062.89	715
26	1064.26	....	1064.31	....	1063.93	....	1063.81		1063.97	....	1063.31	....	1065.31	....	1065.14	1900	1063.31	905	1063.06	790	1063.14	830	1062.85	700
27	1064.24	....	1064.22	....	1063.93	....	1063.81		1063.97	....	1063.33	....	1065.39	....	1064.76	1680	1063.26	880	1063.14	830	1063.16	835	1062.83	690
28	1064.31	....	1064.16	....	1063.91	....	1063.85		1063.99	....	1063.33	....	1065.66	....	1064.47	1510	1063.22	865	1063.33	915	1063.26	880	1062.81	685
29	1064.31	....	1064.08	....	1063.93	....	1063.87		.....	....	1063.31	....	1065.89	....	1064.39	1470	1063.24	875	1063.68	1090	1063.29	895	1062.79	675
30	1064.33	....	1064.02	....	1063.91	....	1063.91		.....	....	1063.33	....	1066.04	....	1064.31	1430	1063.26	880	1063.99	1250	1063.31	905	1062.76	665
31	1064.35	....	.....	....	1063.89	....	1063.95		.....	....	1063.35	....	.....	....	1064.22	1380	.....	....	1064.04	1280	1063.33	915	.....	....

Monthly Discharge of Wabigoon River near Quibell for 1916-7

Drainage Area, 2,400 Square Miles

Month	Discharge in Second-feet			Discharge in Second-feet per Square Mile			Run-off
	Maximum	Minimum	Mean	Maximum	Minimum	Mean	Depth in Inches on Drainage Area
October (1916)							
November "							
December "							
January .. (1917)							
February							
March							
April							
May	2,620	1,380	2,255	1.09	.58	.94	1.08
June	1,340	865	1,055	.56	.36	.44	.49
July	1,280	750	861	.53	.31	.36	.42
August	1,310	830	990	.55	.35	.41	.47
September	915	665	769	.38	.28	.32	.36
The year	2,620	665	1,190	1.09	.28	.50	2.82

Wabigoon River at Wabigoon Falls

Location—About 100 feet above Wabigoon Falls, the last fall on the river, and three miles from its junction with the English River, District of Kenora.

Records Available—Discharge measurements from June, 1914.

Drainage Area—3,120 square miles.

Gauge—Vertical staff with enamelled face screwed to a 5-inch hewn spruce post firmly wedged and braced to the left bank about 200 feet above the metering section. The zero on the gauge (elev. 111.37) is referred to a bench mark (elev. 120.07), consisting of a nail driven in the head of a 4-inch tamarac stump two feet up-stream from the gauge. Another bench mark (elev. 118.51) is painted on a point of rock on the left bank 75 feet below the metering section. The initial point for soundings is on the right bank, the edge of a 5-inch blazed poplar tree, and marked I. P., S. 12° E.

Channel and Control—Straight for about ½ mile above and 100 feet below the station to the falls. Both banks are high, rocky and wooded, and will not overflow. The bed of the stream is composed of rock, with a few boulders and weeds at the right bank. The current is sluggish at and above the station, but swift just below the section.

Discharge Measurements—Made from canoe and ice with a small Price current meter.

Regulation—The Dryden Timber & Power Company operate a plant at Dryden, Ontario. The power is used for the mill and for lighting the town. This plant runs 24 hours per day with the exception of Sundays and holidays, when it runs 12 hours.

Accuracy—The station rating curve is fairly well defined. Estimates of flow have only been made for five open water months.

Discharge Measurements of Wabigoon River at Wabigoon Falls in 1917

Date	Hydrographer	Width in Feet	Area of Section in Sq. Feet	Mean Velocity in Feet per Sec.	Gauge Height in Feet	Discharge in Sec-Feet	Discharge in Second-feet per Square Mile
1917							
Feb. 6....	Taylor, J. R....	215	2,845	.38	112.12	1,087 (a)	.....
" 6....	"	215	2,845	.39	112.12	1,115 (a)	.....
Mar. 29....	"	214	2,783	.34	111.91	948	.....
" 29....	"	214	2,783	.33	111.91	919	.....
July 16....	"	233	2,993	.39	112.12	1,167	.....

(a) Ice measurement. Control clear.

Daily Gauge Height and Discharge of Wabigoon River at Wabigoon Falls for 1917

Drainage Area, 3,120 Square Miles

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge
	Feet	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*
1	.....	.....	.....	.....	.....	.....	Gauge Hts. computed by relation table from Wabigoon at Quibell.	.....	.....	.....	.....	.....	.....	.....	114.22	2710	113.27	1900	112.40	1300	113.23	1860	112.52	1370
2	.....	.....	.....	.....	.....	.....		.....	.....	.....	.....	.....	.....	.....	114.22	2710	113.23	1860	112.40	1300	113.22	1860	112.47	1340
3	.....	.....	.....	.....	.....	.....		.....	.....	.....	.....	.....	.....	.....	114.22	2710	113.19	1830	112.37	1280	113.20	1840	112.42	1310
4	.....	....	.....	.....	.....	.....		.....	.....	.....	.....	.....	.....	.....	114.22	2710	113.14	1800	112.40	1300	113.17	1820	112.40	1300
5	.....	.....	.....	.....	.....	.....		.....	.....	.....	.....	.....	.....	.....	114.26	2740	113.10	1760	112.42	1310	113.14	1800	112.37	1280
6	.....	.....	.....	.....	.....	.....		.....	.....	.....	.....	.....	.....	.....	114.26	2740	113.10	1760	112.47	1340	113.01	1700	112.34	1270
7	.....	.....	.....	.....	.....	.....		.....	.....	.....	.....	.....	.....	.....	114.27	2750	113.02	1700	112.40	1300	112.93	1640	112.31	1250
8	.....	.....	.....	.....	.....	.....		.....	.....	.....	.....	.....	.....	.....	114.28	2760	113.01	1700	112.37	1280	112.89	1610	112.25	1220
9	.....	.....	.....	.....	.....	.....		.....	.....	.....	.....	.....	.....	.....	114.29	2770	112.96	1660	112.34	1270	112,86	1590	112.22	1200
10	.....	.....	.....	.....	.....	.....		.....	.....	.....	.....	.....	.....	.....	114.31	2790	112.93	1640	112.28	1240	112.82	1560	112.16	1180
11	.....	.....	.....	.....	.....	.....		.....	.....	.....	.....	.....	.....	.....	114.29	2770	112.89	1610	112.25	1220	112.68	1470	112.09	1140
12	.....	.....	.....	.....	.....	.....		.....	.....	.....	.....	.....	.....	.....	114.29	2770	112.86	1590	112.22	1200	112.66	1460	112.05	1120
13	.....	.....	.....	.....	.....	.....		.....	.....	.....	.....	.....	.....	.....	114.26	2740	112.82	1560	112.19	1190	112.63	1440	112.00	1100
14	.....		.....	.....	.....	.....		.....	.....	.....	.....	.....	.....	.....	114.22	2710	112.80	1550	112.16	1180	112.61	1430	111.95	1080
15	.....	.....	.....	.....	.....	.....		.....	.....	.....	.....	.....	.....	.....	114.19	2680	112.78	1540	112.12	1160	112.56	1400	112.09	1140
16	.....	.....	.....	.....	....	.....		.....	.....	.....	.....	.....	.....	.....	114.16	2650	112.78	1540	112.12	1160	112.54	1380	111.87	1040
17	.....	.....	.....	.....	.....	.....		.....	.....	.....	.....	.....	.....	.....	114.16	2650	112.78	1540	112.16	1180	112.52	1370	111.82	1020
18	.....	.....	.....	.....	.....	.....		.....	.....	.....	.....	.....	.....	.....	114.15	2640	112.73	1500	112.16	1180	112.49	1350	111.78	1010
19	.....	.....	.....	.....	.....	.....		.....	.....	.....	.....	.....	.....	.....	114.12	2620	112.70	1480	112.12	1160	112.47	1340	111.73	990
20	.....	.....	.....	.....	.....	.....		.....	.....	.....	.....	.....	.....	.....	114.12	2620	112.66	1460	112.09	1140	112.47	1340	111.73	990
21	.....	.....	.....	.....	.....	.....		.....	.....	.....	.....	.....	.....	.....	114.12	2620	112.63	1440	112.05	1120	112.34	1270	111.78	1010
22	.....	.....	.....	.....	.....	.....		.....	.....	.....	.....	.....	.....	.....	114.10	2600	112.61	1430	112.00	1100	112.31	1250	111.82	1020
23	.....	.....	.....	.....	.....	.....		.....	.....	.....	.....	.....	.....	.....	114.10	2600	112.59	1410	112.00	1100	112.28	1240	111.87	1040
24	.....	.....	.....	.....	.....	.....		.....	.....	.....	.....	.....	.....	.....	114.09	2590	112.56	1400	111.95	1080	112.28	1240	111.91	1060
25	.....	.....	.....	.....	.....	.....		.....	.....	.....	.....	.....	.....	.....	114.01	2520	112.54	1380	112.05	1120	112.25	1220	111.78	1010
26	.....	.....	.....	.....	.....	.....		.....	.....	.....	.....	.....	.....	.....	113.83	2370	112.49	1350	112.12	1160	112.25	1220	111.68	975
27	.....	.....	.....	.....	.....	.....		.....	.....	.....	.....	.....	.....	.....	113.64	2200	112.42	1310	112.25	1220	112.28	1240	111.63	955
28	.....	.....	.....	.....	.....	.....		.....	.....	.....	.....	.....	.....	.....	113.47	2060	112.37	1280	112.52	1370	112.42	1310	111.58	940
29	.....	.....	.....	.....	.....	.....		.....	.....	.....	.....	.....	.....	.....	113.42	2020	112.40	1300	112.89	1610	112.47	1340	111.53	925
30	.....	.....	.....	.....	.....	.....		.....	.....	.....	.....	.....	.....	.....	113.38	1980	112.42	1310	113.15	1800	112.49	1350	111.44	895
31	.....	.....	.....	.....	.....	.....		.....	.....	.....	.....	.....	.....	.....	113.31	1930	.....	.....	113.19	1830	112.52	1370	.....	.....

Monthly Discharge of Wabigoon River at Wabigoon Falls for 1917

Drainage Area, 3,120 Square Miles

Month	Discharge in Second-feet			Discharge in Second-feet per Square Mile			Run-off
	Maximum	Minimum	Mean	Maximum	Minimum	Mean	Depth in Inches on Drainage Area
October ..(1916).	.....	.....	.....	.....	.....	.....	.....
November " .	.....	.....	.....	.....	.....	.....	.....
December " .	.....	.....	.....	.....	.....	.....	.....
January..(1917).	.....	.....	.....	.....	.....	.....	.....
February	.....	.....	.....	.....	.....	.....	.....
March.....	.....	.....	.....	.....	.....	.....	.....
April.....	.....	.....	.....	.....	.....	.....	.....
May.....	2,790	1,930	2,572	.89	.62	.82	.95
June.....	1,900	1,280	1,553	.61	.41	.50	.56
July.....	1,830	1,080	1,265	.59	.35	.41	.47
August.....	1,860	1,220	1,462	.60	.39	.47	.54
September.....	1,370	895	1,106	.44	.29	.35	.39
The period	2,790	895	1,595	.89	.29	.51	2.91

Winnipeg River at Whitedog Falls

Location—South channel, about 500 feet above the second Whitedog Falls. North Channel, immediately above the upper fall in this channel. These are the sections established by the Manitoba Hydrographic Survey and where measurements are made by that organization.

Records Available—Discharge measurements have been made at irregular intervals at these sections since the summer of 1914 by the Commission's hydrographers, but more regularly by the Manitoba Hydrographic Survey. The water elevations are returned to, and estimates of flow are made by, the Manitoba Hydrographic Survey.

Drainage Area—27,135 sq. miles.

Gauge—South Channel. Two sections of P.W.D. standard gauge plating are placed on the left bank. The zero of this gauge is at an elevation of 1026.09, referred to a B.M. No. 217 W.P.S. chiselled and painted on rock about 150 feet above the crest of the fall on the right bank elevation 1040.01. North Channel—Two sections of P.W.D. standard gauge plating screwed to a timber bolted to face of rock on the right bank of the river 75 feet above the section. The zero of the gauge is at an elevation of 1034.55 sea level datum referred to a B.M. elevation 1038.61 chiselled and painted on a rock on the left bank at the head of the portage. An automatic gauge is also in use to obtain levels of Sand Lake water, located on an island directly above South Channel.

Channel and Control—The entire flow of the river is always confined to the above described channels. Both of these channels are through bed rock. Active control of the flow of the water tributary above Kenora is exercised at that place.

Discharge Measurements—Are made from a cable car at the south channel and from an overhead cable from the shore at the north channel.

Regular Stations

SOUTH-WESTERN ONTARIO DISTRICT

River	Location	Drainage Area Sq. Miles	Township	County
Ausable	near Arkona	408	West Williams	Middlesex
Beaver	near Kimberley	100	Euphrasia	Grey
Bighead	at Meaford	132	St. Vincent	"
Credit	at Cataract Jct	85	Caledon	Peel
Maitland	at Ben Miller	950	Colborne	Huron
Nottawasaga	near Nicolston	416	Essa	Simcoe
Rocky Saugeen	near Markdale	96	Glenelg	Grey
Saugeen	near Port Elgin	1,565	Saugeen	Bruce
"	near Walkerton	850	Brant	"
Sydenham	near Owen Sound	71	Derby	Grey
Thames, main stream	near Byron	1,270	Delaware	Middlesex
" north branch	near Fanshawe	585	London	"
" south branch	near Ealing	515	London and Westminster	"

Ausable River near Arkona

Location—At the highway bridge at Marsh's Mills, about two miles east of the village of Arkona, near lot 22, concession 7, Township of West Williams, County of Middlesex.

Records Available—Discharge measurements from May 14, 1915. Gauge readings from June 24, 1915.

Drainage Area—408 square miles.

Gauge—Vertical staff gauge 0 to 12 feet on the downstream side of the first pier. The elevation of the zero of the gauge is 0.00 and a B.M. is established on top of the right girder, elevation 23.31.

Channel and Control—The discharge measurements are made in the medium fast water between the two rapids. The flow is confined between the abutments at all stages. The stream bed is composed of shale, and will not shift. The channel is straight for 400 yards above and below the section.

Discharge Measurements—Made from the bridge, except in low water, when they are made at a wading section 300 feet above the bridge.

Accuracy—Discharge measurements do not satisfactorily cover the range of stage.

Observer—Milton Marsh, Arkona P.O.

Discharge Measurements of Ausable River near Arkona in 1917

Date	Hydrographer	Width in Feet	Area of Section in Sq. Feet	Mean Velocity in Feet per Sec.	Gauge Height in Feet	Discharge in Sec-Feet	Discharge in Second-feet per Square Mile
1917							
Feb. 10....	Yeates, W.	25	41	.97	1.71	40(a)	.....
May 17....	"	89	275	.50	1.85	137	.....
Aug. 17....	Roberts, E.	16	32	.80	1.35	25	.....
Oct. 1....	Yeates, W.	22	29	.....	1.32	24	.....

(a) Ice measurement made 600 feet upstream from gauge.

Daily Gauge Height and Discharge of Ausable River near Arkona for 1916-7

Drainage Area, 408 Square Miles

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge
	Feet	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*
1	1.33	32	1.33	32	1.64	90	1.83	98	2.21	164	2.96	184	2.96	685	2.00	200	2.27	308	3.00	710	1.52	64	1.39	39
2	1.29	27	1.31	29	1.62	85	1.83	95	2.21	164	2.87	228	4.46	1970	2.54	442	2.19	276	4.42	1920	1.50	60	1.42	44
3	1.29	27	1.29	27	1.73	112	1.83	92	2.12	136	2.67	228	4.87	2440	2.50	420	2.10	240	3.83	1350	1.50	60	1.37	36
4	1.29	27	1.29	26	1.69	103	1.85	93	2.00	105	2.58	232	4.04	1540	2.29	316	2.10	240	3.37	960	1.50	60	1.37	36
5	1.27	26	1.25	24	1.64	90	2.12	168	1.87	74	2.50	240	3.54	1090	2.31	324	2.00	200	2.83	608	1.50	60	1.37	36
6	1.25	24	1.25	24	1.73	112	3.71	284	1.75	50	2.42	248	4.62	2140	2.25	300	1.98	192	2.54	442	1.50	60	1.46	52
7	1.25	24	1.25	24	1.64	90	3.64	296	1.75	50	2.33	232	4.92	2500	2.19	276	2.42	376	2.33	334	1.46	52	1.42	44
8	1.25	24	1.25	24	1.58	76	3.25	220	1.71	42	2.54	338	4.54	2050	2.10	240	2.37	352	2.33	334	1.44	48	1.31	29
9	1.23	22	1.29	27	1.69	103	2.79	196	1.71	42	2.67	431	3.75	1280	2.21	284	2.12	248	2.67	514	1.40	40	1.37	36
0	1.19	20	1.33	32	1.73	112	2.75	200	1.71	42	2.92	602	3.17	820	2.71	535	1.98	192	2.92	662	1.42	44	1.37	36
1	1.17	19	1.33	32	1.69	103	2.69	196	1.71	42	4.92	2440	2.85	620	2.85	620	1.98	192	3.10	770	1.40	40	1.33	32
2	1.17	19	1.33	32	1.71	107	2.64	196	1.67	36	5.58	3490	2.71	535	2.71	535	1.81	133	2.71	536	1.39	39	1.35	34
3	1.29	27	1.33	32	1.67	85	2.39	128	1.62	30	5.04	2660	2.54	442	2.42	376	1.75	118	2.54	442	1.35	34	1.33	32
4	1.33	32	1.33	32	1.62	64	2.31	118	1.62	30	4.67	2200	2.31	324	2.21	284	2.58	464	2.37	352	1.33	32	1.29	27
15	1.33	32	1.31	29	1.58	46	2.50	196	1.60	28	4.23	1730	2.27	308	2.04	216	2.42	376	2.33	334	1.33	32	1.31	29
16	1.31	29	1.29	27	1.58	46	2.50	212	1.58	26	3.83	1350	2.23	292	1.96	184	2.12	248	2.44	387	1.33	32	1.29	27
17	1.25	24	1.29	27	1.54	39	2.04	85	1.56	25	4.04	1540	2.12	248	1.85	145	1.97	188	2.33	334	1.33	32	1.29	27
18	1.33	32	1.29	27	1.52	36	1.83	50	1.52	22	4.29	1790	2.08	232	1.79	128	1.85	145	4.00	1500	1.29	27	1.29	27
19	1.33	32	1.29	27	1.50	34	1.83	58	1.50	20	3.67	1200	2.08	232	1.79	128	1.77	122	3.71	1240	1.29	27	1.25	24
20	1.62	85	1.29	27	1.50	34	1.75	50	1.50	20	3.62	1160	2.08	232	2.06	224	1.69	103	3.69	1220	1.29	27	1.25	24
21	1.89	157	1.29	27	1.50	34	1.75	50	1.58	26	4.04	1540	2 17	268	2.29	316	1.60	80	3.71	1240	1.29	27	1.29	27
22	1.62	85	1.29	27	1.50	34	1.69	39	1.62	22	4.25	1750	2.33	333	2.71	535	1.55	70	3.42	995	1.33	32	1.25	24
23	1.50	60	1.31	29	1.50	34	1.65	34	2.08	76	5.00	2600	2.42	376	4.50	2010	1.54	68	2.94	674	1.33	32	1.25	24
24	1.44	48	1.54	68	1.50	34	1.64	33	2.37	123	5.71	3710	2.54	442	4.29	1790	1.62	85	2.69	524	1.73	113	1.25	24
25	1.33	32	1.50	60	1.50	34	1.62	30	2.33	88	4.79	2350	2.42	376	5.50	3350	1.67	98	2.37	352	1.71	108	1.25	24
26	1.33	32	1.39	39	1.50	34	1.62	30	2.50	105	4.08	1580	2.33	333	4.42	1920	2.67	513	2.15	260	1.67	98	1.21	21
27	1.33	32	1.42	44	1.54	39	1.62	30	2.81	164	3.67	1200	2.21	284	3.67	1200	5.46	3290	1.96	184	1.75	118	1.27	26
28	1.33	32	1.46	52	1.71	72	1.62	30	3.08	232	3.83	1350	2.17	268	3.23	860	3.64	1175	1.81	133	1.67	98	1.27	26
29	1.33	32	1.56	72	1.83	100	1.62	30	.....	.....	3.64	1180	2.04	216	2.94	675	3.44	1008	1.73	113	1.58	76	1.21	21
30	1.33	32	1.75	118	1.94	128	1.75	50	.....	.....	3.33	930	2.00	200	2.69	524	3.46	1020	1.64	90	1.50	60	1.29	27
31	1.33	32	.....	.....	1.87	110	1.98	100	.....	.....	3.04	735	.....	.....	2.39	361	.....	.....	1.56	72	1.46	52	.....	.....

Monthly Discharge of Ausable River near Arkona for 1916-7

Drainage Area, 408 Square Miles

Month	Discharge in Second-feet			Discharge in Second-feet per Square Mile			Run-off
	Maximum	Minimum	Mean	Maximum	Minimum	Mean	Depth in Inches on Drainage Area
October... (1916)	157	19	37	.38	.05	.09	.10
November ''	118	24	37	.29	.06	.09	.10
December ''	128	34	72	.31	.08	.18	.21
January .. 1917)	296	30	113	.73	.07	.28	.32
February	232	20	71	.57	.05	.17	.18
March	3,710	184	1,336	9.09	.45	3.27	3.77
April	2,500	200	769	6.13	.49	1.88	2.10
May	3,350	128	637	8.21	.31	1.56	1.80
June	3,290	68	404	8.07	.17	.99	1.10
July.....	1,920	72	632	4.71	.18	1.55	1.79
August.....	118	27	34	.29	.07	.13	.15
September.....	52	21	31	.13	.05	.08	.09
The year	3,710	19	352	9.09	.05	.86	11.71

Beaver River near Kimberley

Location—At Hill's Bridge, about 2 miles above Kimberley, on the south half of lot 2, concession 5, Township of Euphrasia, County of Grey.

Records Available—Discharge measurements at Weber's Bridge September, 1914, to January, 1915. Discharge measurements April 25, 1915, to date, at Hill's Bridge. Daily gauge heights from April 25, 1915.

Drainage Area—100 square miles.

Gauge—Vertical staff 0 to 6 feet on tree on left bank 20 feet downstream from bridge. Zero on gauge is 0.00.

Channel and Control—Channel straight above and below for a distance of 200 feet. The banks and control are permanent under ordinary conditions. The bed is composed of stones and gravel, one channel existing at all stages.

Discharge Measurements—Made from the bridge during the high-water period, and from a permanent wading section located 20 feet above the bridge for the low-water stages.

Regulation—The Hydro-Electric Power Commission's power plant located three-quarters of a mile upstream, though a twenty-four hour power, has a marked effect on the river stage at this section.

Accuracy—The rating curve is fairly well defined, but open-water estimates are subject to errors, due to fluctuations in stage caused by operation of power plant.

Observer—A. Hill, Kimberley, P.O.

Discharge Measurements of Beaver River near Kimberley in 1916-7

Date	Hydrographer	Width in Feet	Area of Section in Sq. Feet	Mean Velocity in Feet per Sec.	Gauge Height in Feet	Discharge in Sec-Feet	Discharge in Second-feet per Square Mile
1916							
Oct. 4....	Yeates, W.....	57	22	1.74	.62	38	.....
1917							
Jan. 7....	Roberts, E.	56	27	2.21	.75	60	.....
Feb. 16....	Yeates, W.....	20	37	3.14	2.08	118 (a)	.....
April 13....	Roberts, E.	57	64	2.84	1.42	180 (b)	.....
May 9....	"	55	74	2.80	1.58	206	.....
June 15..	"	57	58	2.76	1.35	160	.....
July 20....	"	57	61	2.98	1.37	182	.....
Aug. 3....	"	57	40	2.47	1.00	99	.....
Sept. 15....	Yeates, W.....	57	37	2.38	.92	89	.....
" 16....	"	57	37	2.46	.92	91	.....
Oct. 17....	"	57	40	2.64	.99	106	.....

(a) Ice measurement.
(b) Ice has scoured bed of stream.

Daily Gauge Height and Discharge of Beaver River near Kimberley for 1916-7

Drainage Area, 100 Square Miles

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge
	Feet	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*
1	0.58	33	0.79	70	1.08	115	1.04	108	1.25	94	1.12	121	2.37	370	2.21	337	1.42	175	1.37	165	0.96	95	0.83	76
2	0.62	37	0.79	70	1.04	108	1.04	108	1.50	137	1.04	108	2.96	494	2.04	301	1.33	158	1.21	137	1.00	101	0.71	58
3	0.62	37	0.87	82	0.79	70	1.04	108	1.42	121	1.00	101	2.92	486	2.04	301	1.21	137	1.21	137	0.96	95	0.92	89
4	0.60	35	0.75	64	0.96	95	0.96	95	1.33	108	0.92	89	2.87	475	2.04	301	1.25	144	1.12	121	0.87	82	1.08	115
5	0.67	41	0.79	70	1.46	182	0.87	82	1.50	135	0.92	89	2.83	467	1.75	240	1.29	150	1.12	121	0.75	64	0.83	76
6	0.62	37	0.79	70	1.00	101	0.83	76	1.62	158	1.04	108	2.75	450	1.29	150	1.29	150	1.12	121	1.00	101	0.96	95
7	0.62	37	0.79	70	1.17	130	0.67	52	1.42	121	0.87	81	2.58	414	1.46	182	1.37	165	1.08	115	0.96	95	0.92	89
8	0.62	37	0.79	70	1.04	108	1.00	101	1.00	101	0.92	89	2.42	381	1.46	182	1.33	158	1.04	108	0.96	95	0.71	58
9	0.62	37	0.92	89	1.25	144	1.00	101	1.25	92	0.87	81	2.37	370	1.54	198	1.29	150	1.42	175	0.96	95	0.75	63
10	0.71	45	0.92	89	0.87	82	1.00	101	1.29	95	0.87	81	1.37	165	1.42	175	1.08	115	2.04	301	0.92	89	0.87	82
11	0.81	55	0.96	95	0.92	89	1.17	130	1.42	121	0.79	70	1.33	158	1.42	175	1.27	147	1.71	232	0.92	89	0.87	82
12	0.81	55	0.71	58	0.83	76	1.21	137	1.79	121	0.92	89	1.50	190	1.42	175	1.27	147	1.87	265	0.87	82	0.83	76
13	0.87	61	0.96	95	1.17	130	1.42	121	1.87	137	1.12	121	1.46	182	1.25	144	1.17	130	2.00	293	1.08	115	1.00	101
14	0.83	57	0.87	82	1.42	175	1.17	121	2.25	206	1.00	101	1.42	175	1.37	165	1.29	150	2.12	318	0.96	95	0.92	89
15	0.75	49	0.87	82	1.42	175	1.42	121	1.96	154	0.96	95	1.21	137	1.33	158	1.33	158	1.67	224	0.96	95	0.75	63
16	0.79	53	0.83	76	1.62	214	1.37	118	1.71	115	1.08	115	1.37	165	1.33	158	0.96	95	1.71	232	0.92	89	0.79	70
17	0.96	72	0.83	76	1.71	232	1.50	135	1.42	121	1.08	115	1.29	150	1.37	165	0.75	63	1.62	214	0.87	82	0.83	76
18	0.79	53	0.83	76	1.83	257	1.37	115	0.75	64	0.79	70	1.33	158	1.33	158	0.92	89	1.62	214	0.80	71	0.92	89
19	0.96	72	0.67	52	2.00	293	1.42	121	1.33	101	0.96	95	1.29	150	1.25	144	1.17	130	1.46	182	0.75	63	0.87	82
20	0.87	61	0.87	82	1.87	265	1.46	128	0.92	89	0.96	95	1.58	206	1.12	121	1.21	137	1.33	158	0.96	95	0.83	76
21	0.79	53	0.92	89	1.87	265	1.33	108	0.96	95	0.96	95	2.08	309	1.25	144	1.04	108	1.00	101	0.96	95	0.87	82
22	0.67	41	1.00	101	1.83	257	1.33	108	0.87	81	1.17	130	1.75	240	1.42	175	1.04	108	0.96	95	0.92	89	1.00	101
23	0.79	53	0.96	95	1.71	232	1.46	130	0.87	81	1.33	158	1.75	240	1.50	190	1.08	115	1.04	108	0.96	95	0.75	63
24	0.83	57	1.00	101	0.96	95	1.46	130	1.04	108	2.04	301	1.79	248	1.42	175	0.96	95	1.00	101	1.08	115	0.87	82
25	0.96	72	1.12	121	1.04	108	1.42	121	0.96	95	1.67	224	2.29	351	1.50	190	1.04	108	0.87	82	0.96	95	0.92	89
26	0.92	67	0.92	89	1.33	158	1.29	98	0.92	89	2.37	370	2.12	318	1.46	182	1.04	108	0.96	95	0.75	63	0.96	95
27	0.83	57	0.87	82	1.42	175	1.21	86	0.92	89	2.92	486	2.04	301	1.33	158	1.12	121	1.00	101	0.75	63	1.00	101
28	0.83	57	1.04	108	1.37	165	1.46	130	1.21	137	2.42	381	2.21	337	1.42	175	1.08	115	0.96	95	1.08	115	0.92	89
29	0.79	53	1.37	165	1.21	137	1.25	95	.....	.....	2.08	309	2.00	293	1.46	182	1.25	144	0.92	89	1.00	101	0.92	89
30	0.92	67	1.42	175	1.04	108	0.92	89	.....	.....	2.08	309	2.12	318	1.42	175	1.08	115	0.92	89	1.00	101	0.75	63
31	0.81	55	.....	.....	1.04	108	0.96	95	.....	.....	2.12	318	.....	.....	1.42	175	.....	.....	0.96	95	0.83	76	.....	.....

Monthly Discharge of Beaver River near Kimberley for 1916-7

Drainage Area, 100 Square Miles

Month	Discharge in Second-feet			Discharge in Second-feet per Square Mile.			Run-off
	Maximum	Minimum	Mean	Maximum	Minimum	Mean	Depth in Inches on Drainage Area
October (1916)	72	33	51	.72	.33	.51	.59
November "	175	52	88	1.75	.52	.88	.98
December "	293	70	156	2.93	.70	1.56	1.80
January .. (1917)	137	52	109	1.37	.52	1.09	1.26
February	206	64	113	2.06	.64	1.13	1.18
March	486	70	161	4.86	.70	1.61	1.86
April.....	494	137	290	4.94	1.37	2.90	3.24
May.....	337	121	189	3.37	1.21	1.89	2.18
June.....	175	63	130	1.75	.63	1.30	1.45
July.....	318	82	158	3.18	.82	1.58	1.82
August	115	63	90	1.15	.63	.90	1.04
September	115	58	82	1.15	.58	.82	.91
The year.....	494	33	135	4.94	.33	1.35	18.30

Bighead River at Meaford

Location—At the Georgian Bay Milling & Power Co. grist mill bridge outside of the Town of Meaford, near lot 15, concession 5, Township of St. Vincent, County of Grey.

Records Available—Discharge measurements and daily gauge heights from June 10, 1915.

Drainage Area—132 square miles.

Gauge—Vertical staff 0 to 12 feet on right abutment. Elevation of zero on gauge is 0.00.

Channel and Control—The channel is straight for 100 feet above and 500 feet below the gauging station. The bed of the stream is composed of stones and gravel, and is shifting. During the freshet stage, banks and control are not stationary. During a freshet in January, 1916, the stream scoured badly, completely changing the rating curve.

Discharge Measurements—Made at the bridge, also at a wading station 100 feet downstream.

Regulation—Low-water flow is controlled by the Georgian Bay Milling & Power Co.'s dam located four miles upstream. As the plant is usually run for 24 hours each day, except Sunday, the fluctuations will not be great.

Accuracy—The rating curve is subject to changing conditions due to scouring.

Observer—Wilbert Baker, Meaford.

Discharge Measurements of Bighead River at Meaford in 1916-7

Date	Hydrographer	Width in Feet	Area of Section in Sq. Feet	Mean Velocity in Feet per Sec.	Gauge Height in Feet	Discharge in Sec-Feet	Discharge in Second-feet per Square Mile
1916							
Oct. 4....	Yeates, W.....	13	7	.87	.96	6	.....
" 4....	"	43	29	.20	.96	6	.....
1917							
Jan. 5....	Roberts, E.....	70	69	2.00	1.75	138 (a)	.....
Feb. 18....	Yeates, W.....	20	18	2.56	2.62	47 (b)	.....
April 11....	Roberts, E.....	84	147	2.72	2.42	401 (c)	.....
May 8....	"	80	94	1.85	1.92	174	.....
June 14....	"	95	127	2.50	2.33	318	.....
July 19....	"	75	875	1.85	1.83	162	.....
Aug. 3....	"	67	63	.99	1.42	62	.....
Sept. 15....	Yeates, W.....	23	3	.44	.83	2	.....
Oct. 17....	"	47	29	.35	1.12	10	.....

(a) Section partially ice-covered.
(b) Ice measurement made 100 feet above regular section.
(c) Section has scoured badly.

Daily Gauge Height and Discharge of Bighead River at Meaford for 1916-7

Discharge Area, 132 Square Miles

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge
	Feet	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*
1	0.62	0	1.48	73	2.25	173	1.98	138	2.50	101	3.69	179	3.81	925	2.19	267	1.67	121	2.54	403	1.42	76	1.29	57
2	1.27	46	1.42	66	2.00	151	1.89	127	2.44	89	3.33	132	4.14	1060	2.35	320	1.67	121	2.54	403	1.42	76	1.33	64
3	1.25	43	1.42	66	2.00	141	1.83	119	2.31	68	2.79	62	4.14	1060	2.33	318	1.67	121	2.27	295	1.39	72	1.33	64
4	0.67	0	1.42	66	2.00	141	1.83	119	2.17	46	2.50	24	3.83	930	2.27	295	1.60	107	2.12	243	1.35	66	1.33	64
5	0.69	0	0.83	0	2.19	166	1.83	119	2.17	42	2.50	24	3.56	820	2.19	267	1.58	103	1.89	174	1.37	69	1.35	66
6	1.31	51	1.50	76	2.33	184	1.92	127	2.27	51	2.50	24	3.96	985	2.17	260	1.62	111	1.83	158	1.37	69	1.33	64
7	1.25	43	1.44	68	2.52	209	1.85	114	2.50	77	2.42	14	3.67	865	2.04	217	1.79	148	1.67	121	1.37	69	1.37	69
8	0.67	0	1.42	66	2.50	206	1.83	107	2.33	51	2.33	3	3.33	725	1.94	188	2.00	205	2.54	403	1.35	66	1.42	76
9	1.23	41	1.39	62	2.35	187	1.87	109	2.69	94	2.33	3	3.00	590	1.92	183	1.96	194	2.79	505	1.33	64	0.79	9
10	0.67	0	1.46	71	2.17	163	1.92	111	2.62	81	2.33	3	2.81	515	1.87	169	1.85	164	4.17	1070	1.37	69	1.42	76
11	1.27	46	1.50	76	2.10	154	1.92	107	2.73	92	2.83	67	2.42	355	1.83	158	1.75	138	4.08	1030	1.42	76	0.75	7
12	1.29	49	1.50	76	2.02	144	1.98	111	2.75	90	2.64	42	3.04	610	1.83	158	1.64	115	3.50	795	1.42	76	1.39	72
13	1.50	76	1.50	76	2.00	141	2.00	110	2.83	97	2.67	46	2.75	490	1.75	139	1.67	121	2.71	473	1.44	79	1.33	64
14	1.56	84	1.50	76	2.00	141	2.00	106	2.83	93	3.33	132	2.67	455	1.75	139	2.02	211	2.42	354	1.60	107	1.42	76
15	1.58	86	1.50	76	1.98	138	2.00	102	2.67	68	3.04	94	2.56	410	1.75	139	1.94	188	2.37	334	1.48	86	1.02	26
16	1.75	108	1.50	76	1.94	133	2.00	98	2.67	64	2.67	46	2.50	387	1.71	129	1.83	158	2.08	229	1.42	76	0.67	3
17	1.85	121	1.52	79	1.92	131	2.52	162	2.67	60	3.08	151	2.39	342	1.67	121	1.64	115	2.06	223	1.35	66	1.33	64
18	1.75	108	1.58	86	1.87	124	2.44	148	2.67	57	3.00	167	2.33	318	1.67	121	1.58	103	1.92	183	1.33	64	1 33	64
19	1.77	111	1.52	79	1.96	136	2.33	129	2.73	60	4.42	404	2.48	378	1.67	121	1.62	111	1.92	183	0.75	7	1.00	24
20	1.73	106	1.50	76	2.00	141	2.33	125	2.75	56	4.60	453	2.87	540	1.67	121	1.89	174	1.81	153	1.35	66	1.33	64
21	1.67	98	1.44	68	2.10	154	2.19	103	2.69	49	3.79	374	3.52	805	1.73	134	1.77	143	1.77	143	1.33	64	1.02	26
22	1.64	94	1.42	66	2.04	146	2.08	85	2.67	46	4.50	466	3.33	725	1.87	169	1.67	121	1.75	139	1.33	64	1.37	69
23	1.58	86	1.52	79	1.98	138	2.00	71	2.67	46	4.33	444	2.87	540	2.08	230	1.71	129	1.75	139	1.33	64	0.67	3
24	1.50	76	1.58	86	1.92	131	2.00	67	2.67	46	5.94	653	2.62	436	2.33	318	1.67	121	1.67	121	1.37	69	1.37	69
25	1.50	76	1.58	86	1.96	136	2.00	63	2.67	46	5.17	553	2.52	395	2.35	326	1.73	134	1.60	107	1.52	93	0.69	4
26	1.46	71	1.58	86	2.06	149	2.10	72	3.04	94	4.96	526	2.52	395	2.25	288	1.75	138	1.50	89	1.39	72	1.33	64
27	1.42	66	1.71	103	2.14	159	2.17	77	3.08	99	5.06	539	2.44	362	2.14	250	1.67	121	1.52	93	1.33	64	1.33	64
28	1.42	66	1.81	116	2.17	163	2.17	73	3.58	164	4.94	523	2.33	318	2.00	205	1.67	121	1.50	89	1.25	52	1.37	69
29	1.42	66	2.08	151	1.94	133	2.17	70	.....	.....	4.46	461	2.33	318	1.79	148	1.67	121	1.50	89	1.27	54	1.33	64
30	1.52	79	2.44	198	1.92	131	2.08	54	.....	.....	4.06	1030	2.33	318	1.73	134	1.83	158	1.46	83	1.25	52	1.39	72
31	1.50	76	.....	.....	1.92	131	2.08	50	.....	.....	4.00	1000	.....	.....	1.67	121	.....	.....	1.42	76	1.29	57	.....	.....

Monthly Discharge of Bighead River at Meaford for 1916-7

Drainage Area, 132 Square Miles

Month	Discharge in Second-feet			Discharge in Second-feet per Square Mile			Run-off
	Maximum	Minimum	Mean	Maximum	Minimum	Mean	Depth in Inches on Drainage Area
October (1916)	121	0	64	.92	.00	.48	.55
November "	198	0	81	1.50	.00	.61	.68
December "	184	124	151	1.39	.94	1.14	1.31
January.. (1917)	148	50	102	1.12	.38	.77	.89
February.....	164	42	72	1.24	.32	.55	.57
March.....	1,030	3	278	7.80	.02	2.11	2.43
April.....	1,060	318	579	8.03	2.41	4.39	4.90
May.....	326	121	198	2.47	.92	1.50	1.73
June	205	103	138	1.55	.78	1.05	1.17
July.....	1,070	76	287	8.11	.58	2.17	2.50
August.....	107	7	68	.81	.05	.51	.59
September.....	76	3	53	.58	.02	.40	.45
The year..... ...	1,070	0	173	8.11	.00	1.31	17.79

Credit River at Cataract Junction

Location—About 500 feet from C.P.R. station at Cataract Junction, lot 14, concession 3, Township of Caledon, County of Peel.

Records Available—Discharge measurements from June, 1912. Daily gauge heights from May 7, 1915.

Drainage Area—85 square miles.

Gauge—Vertical staff 0 to 6 feet on tree on right bank. Zero on gauge (elevation 8.00) is referred to a B.M. (elevation 10.00) painted on rock 100 feet downstream from metering section.

Channel and Control—The channel is straight for about 350 feet above and 300 feet below the section. The right bank is low, and overflows during high stages. The bed is composed of gravel, which is shifting during flood stages.

Discharge Measurements—Made at permanent wading section at all stages.

Winter Flow—Relation of gauge height to discharge is affected by ice, and measurements are made to determine this flow.

Regulation—The dam at Erin, about four miles upstream, causes serious fluctuations in the river stage at this section. Semi-daily gauge readings will not give a representative mean.

Accuracy—A fairly well-defined rating curve has been established for this station. The accuracy of the estimates of discharge depends upon the accuracy of the mean daily gauge heights.

Observer—Alfred Riches, Cataract Junction.

Discharge Measurements of Credit River at Cataract Junction in 1917

Date	Hydrographer	Width in Feet	Area of Section in Sq. Feet	Mean Velocity in Feet per Sec.	Gauge Height in Feet	Discharge in Sec-Feet	Discharge in Second-feet per Square Mile
1917							
May 12....	Roberts, E.	41	33	1.85	.81	61	.....
" 23....	Yeates, W.....	41	42	2.70	1.08	112	.....
July 26....	Roberts, E.....	40	22	1.22	8.56	27	.....
Sept. 26....	Yeates, W.....	40	19	.87	8.47	16	.....
Oct. 19....	"	40	29	1.45	8.71	42	.....

Daily Gauge Height and Discharge of Credit River at Cataract Junction for 1916-7

Drainage Area, 85 Square Miles

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge
	Feet	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*
1	8.60	27	8.65	32	8.74	43	9.25	37	9.43	42	9.83	129	9.55	280	8.81	54	8.72	40	8.91	72	8.56	25	8.61	28
2	8.57	24	8.63	30	8.65	32	9.21	54	9.12	19	9.69	91	9.84	410	8.79	51	8.72	40	9.12	126	8.56	25	8.61	28
3	8.56	23	8.69	36	8.61	28	9.12	65	9.25	24	9.53	57	9.75	368	8.79	51	8.73	42	8.87	65	8.60	27	8.61	28
4	8.50	18	8.71	39	8.71	39	8.87	40	9.31	28	9.75	107	9.39	217	8.77	48	8.68	35	8.76	46	8.58	26	8.57	26
5	8.61	28	8.63	30	8.75	45	8.71	28	9.54	59	9.73	101	9.21	154	8.76	46	8.64	31	8.71	39	8.54	24	8.54	24
6	8.57	24	8.72	40	8.69	36	8.75	45	9.21	22	9.71	96	9.14	132	8.94	79	8.67	34	8.67	34	8.59	27	8.50	22
7	8.55	22	8.67	34	8.64	31	8.69	36	9.37	34	9.69	91	9.12	126	8.83	57	8.69	36	8.62	29	8.57	26	8.61	28
8	8.50	18	8.63	30	8.69	36	8.69	36	9.39	36	9.73	101	9.06	109	8.79	51	8.75	45	8.72	40	8.63	30	8.56	25
9	8.57	24	8.63	30	8.69	36	8.96	38	9.28	26	9.64	79	9.00	93	8.78	49	8.69	36	8.96	84	8.79	51	8.56	25
10	8.59	26	8.70	37	8.69	36	9.67	141	9.19	22	9.44	43	8.94	79	8.76	46	8.70	37	9.33	196	8.70	37	8.59	27
11	8.58	25	8.69	36	8.71	39	9.92	157	9.17	21	9.33	30	8.92	75	8.71	39	8.70	37	9.89	435	8.63	30	8.56	25
12	8.53	21	8.72	40	8.63	30	9.84	132	9.31	28	9.53	15	9.06	109	8.73	42	8.65	32	9.17	141	8.64	31	8.56	25
13	8.59	26	8.69	36	8.85	44	9.76	109	9.44	43	8.85	16	9.00	93	8.63	30	8.63	30	9.01	96	8.64	31	8.52	23
14	8.56	23	8.69	36	8.88	35	9.83	129	9.67	86	8.84	17	8.90	70	8.64	31	8.71	39	9.21	154	8.59	27	8.56	25
15	8.52	20	8.62	29	9.31	96	9.58	66	9.23	24	8.85	15	8.88	66	8.63	30	8.76	46	9.15	135	8.59	27	8.59	27
16	8.62	30	8.51	23	9.50	120	9.60	70	9.69	91	8.64	17	8.81	54	8.64	31	8.72	40	8.85	61	8.59	27	8.51	23
17	8.60	27	8.63	30	9.42	75	9.71	96	9.39	36	8.69	22	8.79	51	8.64	31	8.68	35	8.92	75	8.59	27	8.56	25
18	8.58	25	8.56	25	9.52	75	9.64	79	9.52	56	8.79	36	8.83	57	8.62	29	8.69	36	8.80	52	8.58	26	8.52	23
19	8.62	30	8.47	21	9.67	86	9.58	66	9.04	17	8.83	29	8.87	65	8.64	31	8.70	37	8.77	48	8.55	25	8.55	25
20	8.87	71	8.68	35	9.29	50	9.43	42	9.60	70	8.81	34	8.93	77	8.70	37	8.71	39	8.72	40	8.60	27	8.52	23
21	8.96	92	8.71	39	9.29	50	9.33	30	9.62	75	8.87	52	9.10	120	8.69	36	8.60	27	8.67	34	8.54	24	8.57	26
22	8.83	63	8.77	48	9.98	21	9.56	63	9.56	63	8.86	63	9.04	104	8.75	45	8.62	29	8.69	36	8.51	23	8.55	25
23	8.72	44	8.60	27	9.52	56	9.42	40	9.65	82	9.04	104	8.92	75	9.08	115	8.60	27	8.63	30	8.53	24	8.52	23
24	8.71	43	8.66	33	9.37	34	9.46	46	9.75	107	10.27	625	8.89	68	9.02	98	8.83	57	8.60	27	8.77	48	8.58	26
25	8.61	28	8.67	34	9.48	49	9.56	63	9.62	75	10.69	835	8.81	54	8.97	86	8.74	43	8.62	29	8.63	30	8.59	27
26	8.59	26	8.72	40	9.58	66	9.03	17	9.75	107	11.14	1060	8.86	63	8.78	49	8.75	45	8.60	27	8.60	27	8.54	24
27	8.62	30	8.74	43	9.48	49	9.42	40	9.80	120	10.94	960	8.85	61	8.73	42	8.79	51	8.60	27	8.61	28	8.54	24
28	8.60	27	8.62	29	9.33	30	9.18	21	9.81	123	10.31	645	8.81	54	8.72	40	8.72	40	8.60	27	8.61	28	8.54	24
29	8.62	30	8.79	51	9.44	43	9.56	63	.....	.....	9.70	345	8.77	48	8.70	37	8.72	40	8.65	32	8.60	27	8.52	23
30	8.73	46	8.75	45	9.31	28	9.44	43	.....	.....	9.62	309	8.83	57	8.60	27	8.72	40	8.62	29	8.61	28	8.53	24
31	8.64	33	.....	.....	9.31	28	9.62	75	.....	.....	9.27	175	.....	.....	8.69	36	.....	.....	8.53	24	8.53	24	.....	.....

Monthly Discharge of Credit River at Cataract Junction for 1916-7

Drainage Area, 85 Square Miles

Month	Discharge in Second-feet			Discharge in Second-feet per Square Mile			Run-off
	Maximum	Minimum	Mean	Maximum	Minimum	Mean	Depth in Inches on Drainage Area
October (1916)	92	18	32	1.08	.21	.38	.44
November "	51	21	35	.60	.25	.41	.46
December "	120	21	47	1.41	.25	.55	.63
January (1917)	157	17	64	1.85	.20	.75	.86
February	123	17	55	1.45	.20	.65	.68
March	1,060	15	203	12.48	.18	2.39	2.76
April	410	51	113	4.82	.60	1.33	1.48
May	115	27	48	1.35	.32	.56	.65
June	57	27	38	.67	.32	.45	.50
July	435	24	74	5.12	.28	.87	1.00
August	51	23	29	.60	.27	.34	.39
September	28	22	25	.33	.26	.29	.32
The year	1,060	15	64	12.48	.18	.75	10.22

Maitland River at Ben Miller

Location—At the highway bridge in the Village of Ben Miller, five miles south-west of the Town of Goderich, Township of Colborne, County of Huron.

Records Available—Discharge measurements from May, 1911. Daily gauge heights from June 1, 1911.

Drainage Area—950 square miles.

Gauge—Vertical steel staff gauge with enamelled face graduated in feet and inches and located on the downstream side of the first pier from the left abutment. The zero on the gauge (elev. 12.00) is referred to a bench mark (elev. 29.07) painted on the downstream side of the right wing wall.

Channel and Control—The channel is straight for 300 feet above and ¼ mile below the section. Both banks are low, clean and liable to overflow at high stages. The control is permanent during all stages, being composed of limestone.

Discharge Measurements—Made from the bridge at ordinary and high stages, and at a permanent wading section during the low water period.

Winter Flow—Ice greatly affects relation of gauge height to discharge. The section being wide and shallow, ice frequently freezes to the bottom, rendering meter measurements impossible.

Accuracy—For the low water a well-defined rating curve has been established.

Observer—E. Pfrimmer, Ben Miller P.O.

Discharge Measurements of Maitland River at Ben Miller in 1917

Date	Hydrographer	Width in Feet	Area of Section in Sq. Feet	Mean Velocity in Feet per Sec.	Gauge Height in Feet	Discharge in Sec-Feet	Discharge in Second-feet per Square Mile
1917							
Aug. 14....	Yeates, W.....	.....	122	.....	13.42	199	.....

Daily Gauge Height and Discharge of Maitland River at Ben Miller for 1916-7

Drainage Area, 950 Square Miles

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge
	Feet	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*
1	13.21	113	13.33	171	14.25	1160	14.33	377	14.67	740	14.67	413	15.25	3420	14.33	1300	14.08	890	17.25	11600	13.50	270	13.42	222
2	13.17	104	13.33	171	14.12	950	14.33	377	14.67	740	14.67	413	15.83	5260	14.75	2160	14.04	835	17.83	14510	13.50	270	13.42	222
3	13.12	94	13.33	171	14.04	835	14.33	377	14.67	740	14.67	413	15.42	3910	14.92	2550	16.50	8030	16.50	8030	13.50	270	13.37	193
4	13.12	94	13.33	171	14.96	2650	14.33	377	14.67	740	14.67	413	15.42	3910	14.67	1990	15.67	4710	15.67	4710	13.54	302	13.37	193
5	13.12	94	13.33	171	14.08	890	14.42	460	14.67	740	14.67	413	15.50	4160	14.54	1710	15.00	2750	15.00	2750	13.50	270	13.33	171
6	13.12	94	13.29	150	14.17	1030	14.50	540	14.67	740	14.67	413	15.67	4710	14.42	1470	14.67	1990	14.67	1990	13.50	270	13.33	171
7	13.12	94	13.29	150	14.25	1160	14.67	740	14.67	740	14.67	413	15.58	4420	14.33	1300	14.92	2550	14.92	2550	13.50	270	13.31	161
8	13.12	94	13.29	150	14.33	1300	14.67	740	14.67	740	14.67	413	15.33	3650	14.25	1160	15.42	3910	15.42	3910	13.46	246	13.29	150
9	13.12	94	13.33	171	14.33	1300	14.67	740	14.67	740	14.67	413	15.00	2750	14.25	1160	15.67	4710	15.67	4710	13.46	246	13.29	150
10	13.12	94	13.33	171	14.33	1300	14.67	740	14.67	740	14.67	413	14.92	2550	14.21	1100	14.00	780	15.50	4160	13.42	222	13.25	130
11	13.12	94	13.33	171	14.17	880	14.67	740	14.67	740	15.92	2550	14.92	2550	14.17	1030	13.92	675	15.50	4160	13.42	222	13.25	130
12	13.08	87	13.33	171	14.00	650	14.67	740	14.67	740	15.37	1380	14.83	2340	14.08	890	13.83	575	15.25	3420	13.37	193	13.25	130
13	13.33	154	13.33	171	13.67	252	14.67	740	14.67	740	15.92	2550	14.75	2160	14.00	780	13.83	575	15.00	2750	13.37	193	13.21	110
14	13.29	137	13.37	193	13.54	177	14.67	740	14.67	740	16.00	2750	14.58	1800	13.92	675	14.33	1300	15.00	2750	13.42	222	13.21	110
15	13.25	125	13.37	193	13.50	105	14.67	740	14.67	740	16.08	2960	14.46	1550	13.83	575	14.75	2160	15.08	2960	13.42	222	13.21	110
16	13.29	137	13.37	193	13.50	105	14.67	740	14.67	740	16.08	2960	14.37	1380	13.75	490	14.58	1800	15.08	2960	13.42	222	13.21	110
17	13.37	172	13.42	222	13.67	140	14.67	740	14.67	740	16.33	3650	14.29	1230	13.71	450	14.33	1300	15.00	2750	13.37	193	13.17	94
18	13.46	221	13.42	222	14.37	740	14.67	740	14.67	740	16.33	3650	14.25	1160	13.71	450	14.08	890	15.00	2750	13.37	193	13.17	94
19	13.50	245	13.42	222	14.25	490	14.67	740	14.67	740	16.33	3650	14.25	1160	13.92	675	14.33	1300	14.58	1800	13.37	193	13.17	94
20	13.50	245	13.50	270	14.12	368	14.67	740	14.67	740	16.33	3650	14.25	1160	14.08	890	14.75	2160	14.42	1470	13.37	193	13.17	94
21	13.46	221	13.42	222	14.04	234	14.67	740	14.67	740	17.25	8250	14.75	2160	14.12	950	14.75	2160	14.33	1300	13.33	171	13.17	94
22	13.46	221	13.33	171	14.00	210	14.67	740	14.67	740	17.42	10970	14.71	2070	14.17	1030	14.25	1160	14.25	1160	13.33	171	13.17	94
23	13.46	221	13.48	258	14.00	210	14.67	740	14.67	740	16.42	7670	14.67	1990	14.67	1990	14.08	890	14.17	1030	13.42	222	13.17	94
24	13.46	221	13.67	413	13.92	166	14.67	740	14.67	740	17.25	11600	14.50	1630	15.00	2750	14.33	1300	13.96	730	13.42	222	13.17	94
25	13.42	197	13.52	286	13.87	140	14.67	740	14.67	740	18.17	16250	14.37	1380	15.42	3910	14.50	1630	13.87	615	13.42	222	13.17	94
26	13.42	197	13.58	334	13.83	120	14.67	740	14.67	740	18.17	16250	14.29	1230	15.42	3910	15.50	4160	13.75	490	13.42	222	13.17	94
27	13.39	180	13.71	450	13.92	166	14.67	740	14.67	740	17.58	13250	14.25	1160	15.25	3420	15.58	4420	13.71	450	13.50	270	13.17	94
28	13.39	180	13.69	431	13.92	166	14.67	740	14.67	740	17.00	10380	14.17	1030	14.58	1800	15.58	4420	13.67	415	13.50	270	13.17	94
29	13.39	180	14.00	780	13.92	166	14.67	740	.....	.....	16.50	8030	14.08	890	14.33	1300	15.42	3910	13.58	334	13.50	270	13.17	94
30	13.33	154	14.25	1160	13.92	166	14.67	740	.....	.....	16.08	6210	14.00	780	14.17	1030	15.33	3650	13.54	302	13.50	270	13.25	130
31	13.33	154	.....	.....	13.92	166	14.67	740	.....	.....	15.75	4980	.....	.....	14.08	890	.....	.....	13.50	270	13.46	246	.....	.....

Monthly Discharge of Maitland River at Ben Miller for 1916-7

Drainage Area, 950 Square Miles

Month	Discharge in Second-feet			Discharge in Second-feet per Square Mile			Run-off
	Maximum	Minimum	Mean	Maximum	Minimum	Mean	Depth in Inches on Drainage Area
October (1916)	245	87	152	.26	.09	.16	.18
November "	1,160	150	273	1.22	.16	.29	.32
December "	2,650	105	593	2.79	.11	.62	.71
January ..(1917)	740	377	678	.78	.40	.71	.82
February	740	740	740	.78	.78	.78	.81
March	16,250	413	4,765	17.11	.43	5.02	5.79
April	5,260	780	2,318	5.54	.82	2.44	2.72
May	3,910	450	1,477	4.12	.47	1.55	1.79
June.....	8,030	575	2,386	8.46	.61	2.51	2.80
July	14,510	270	3,025	15.27	.28	3.18	3.67
August	302	171	233	.32	.18	.25	.29
September	222	94	127	.23	.10	.13	.15
The year.....	16,250	87	1,404	17.11	.09	1.48	20.06

Nottawasaga River near Nicolston

Location—At McLean's Bridge, 4 miles north of the Town of Nicolston, near lot 5, concession 6, Township of Essa, County of Simcoe.

Records Available—Discharge measurements from June, 1912. Daily gauge heights from August 18, 1914.

Drainage Area—416 square miles.

Gauge—Vertical staff 0 to 12 feet on right abutment, upstream side. Zero on the gauge (elevation 4.00) is referred to B.M. (elevation 20.00) on tension rod of bridge 60 feet from initial point for soundings.

Channel and Control—The channel below the section is straight for about 600 feet. Above the section it is straight for about 100 feet, when it takes a sharp turn to the right, causing an angle at the bridge. Both banks and control are subject to change under high-water conditions.

Discharge Measurements—Made from the bridge at all stages.

Winter Flow—The relation of gauge height to discharge is affected by ice during the winter months and measurements are made to compute the winter flow.

Regulation—The dams above have little effect on this section.

Accuracy—These records, with the reduction made for the angle at section, can be considered good up to discharges of 800 second feet. There are not sufficient records available to compute discharges very accurately above gauge height 8.00 feet. The estimate made is probably close to the actual discharge.

Observer—John Scott, Egbert P.O.

Discharge Measurements of Nottawasaga River near Nicolston in 1917

Date	Hydrographer	Width in Feet	Area of Section in Sq. Feet	Mean Velocity in Feet per Sec.	Gauge Height in Feet	Discharge in Sec-Feet	Discharge in Second-feet per Square Mile
1917							
May 25....	Yeates, W.....	90	422	1.07	7.32	454	.....
June 21....	Roberts, E.....	82	166	.91	6.08	150	.....

Daily Gauge Height and Discharge of Nottawasaga River near Nicolston for 1916-7

Drainage Area, 416 Square Miles

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge
	Feet	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*
1	5.54	106	5.75	140	6.67	324	6.12	170	6.33	186	6.54	220	8.96	918	6.33	256	5.87	164	6.52	294	5.37	80	5.42	88
2	5.44	91	5.79	148	6.17	224	6.23	188	6.23	166	6.54	218	9.83	1205	6.46	282	5.98	186	8.71	843	5.67	125	5.44	91
3	5.44	91	5.75	140	6.17	224	6.12	162	6.19	158	6.50	210	10.46	1426	6.37	264	5.85	160	7.75	572	5.54	106	5.67	125
4	5.42	88	5.81	152	6.21	232	6.06	146	6.08	136	6.27	162	10.52	1447	6.46	282	5.85	160	6.83	356	5.44	91	5.69	128
5	5.54	106	6.10	210	6.21	232	6.21	172	6.37	194	6.50	208	9.37	1044	6.33	256	5.87	164	6.27	244	5.35	78	5.62	118
6	5.50	100	6.00	190	6.71	332	6.29	184	6.35	190	6.62	230	9.50	1090	6.42	274	5.83	156	6.02	194	5.46	94	5.58	112
7	5.48	97	5.92	174	6.29	248	6.33	188	6.37	194	6.54	218	9.46	1076	6.64	318	5.92	174	5.92	174	5.52	103	5.54	106
8	5.25	65	5.96	182	6.17	224	6.35	190	6.35	194	6.50	204	8.71	843	6.48	286	6.12	214	5.89	168	5.67	125	5.50	100
9	5.31	72	6.00	190	6.21	232	6.23	166	6.33	186	6.60	224	7.87	603	6.25	240	6.02	194	6.37	264	5.62	118	5.35	78
10	5.50	100	6.08	206	6.21	232	6.25	170	6.31	182	6.58	218	7.54	520	6.12	214	6.00	190	8.50	780	5.60	115	5.39	83
11	5.44	91	6.25	240	6.21	232	6.25	170	6.04	128	6.62	226	7.37	478	6.04	198	5.96	182	10.96	1611	5.58	112	5.39	83
12	5.56	109	5.87	154	6.10	210	6.25	170	6.31	182	6.83	266	7.56	525	5.87	164	5.77	144	9.35	1038	5.50	100	5.44	91
13	5.52	103	5.96	182	6.00	190	6.19	158	6.27	174	6.81	262	8.33	729	5.75	140	5.73	136	8.29	717	5.48	97	5.52	103
14	5.62	118	6.00	190	6.06	202	6.08	136	6.14	148	6.67	234	7.37	478	5.87	164	5.83	156	8.25	705	5.47	95	5.46	94
15	5.54	106	6.00	190	5.81	152	6.37	194	6.08	136	6.77	254	7.08	406	5.71	132	6.23	236	9.31	1024	5.48	97	5.46	94
16	5.44	91	5 87	154	5.71	132	6.25	170	6.25	170	6.77	254	6.94	378	5.69	128	5.96	182	8.79	867	5.50	100	5.35	78
17	5.67	96	5.96	182	5.67	125	6.17	154	6.21	162	7.62	453	6.67	324	5.71	132	5.92	174	7.60	535	5.46	94	5.46	94
18	5.81	152	5.75	140	5.83	156	6.08	136	6.19	158	8.08	593	6.62	314	5.73	136	5.89	168	7.27	453	5.37	80	5.44	91
19	5.87	164	5.96	182	5.64	121	6.21	162	6.27	174	7.98	593	6.67	324	5.75	140	6.83	356	7.00	390	5.33	74	5.48	97
20	6.83	356	5.96	182	5.64	121	6.17	154	6.35	190	8.42	756	7.04	398	5.83	156	6.77	344	6.73	336	5.39	83	5.44	91
21	7.06	402	5.96	182	5.67	125	5.98	119	6.33	186	8.21	693	8.08	655	5.96	182	6.14	218	6.48	286	5.35	78	5.48	97
22	6.58	306	6.04	198	5.64	118	6.25	170	6.42	202	9.00	930	8.33	729	6.02	194	5.81	152	6.17	224	5.37	80	5.48	97
23	6.08	206	6.00	190	5.75	132	6.21	162	6.33	184	9.75	1175	7.69	558	8.04	649	5.67	125	6.12	214	5.37	80	5.33	74
24	6.04	198	6.29	248	5.81	140	6.21	162	6.46	208	14.21	2904	6.96	382	8.00	635	6.04	198	5.87	164	5.48	97	5.42	88
25	5.85	160	6.21	232	5.94	162	6.25	170	6.14	144	16.00	3620	6.58	306	7.29	458	6.71	332	5.77	144	5.81	152	5.46	94
26	5.75	140	5.75	140	5.98	166	6.23	166	6.46	206	17.00	4020	6.52	294	7.12	415	6.21	232	5.73	136	5.46	94	5.42	88
27	5.83	156	6.08	206	5.94	154	6.31	182	6.46	206	15.79	3536	6.83	356	7.04	398	6.25	240	5.69	128	5.77	144	5.54	106
28	5.79	148	6.08	206	6.02	166	6.00	123	6.54	220	14.83	3152	6.71	332	7.00	390	5.96	182	5.64	121	5.58	112	5.58	112
29	5.71	132	6.25	240	6.02	162	6.23	166	.....	.....	12.29	2136	6.31	352	6.96	382	5.94	178	5.67	125	5.50	100	5.58	112
30	5.79	148	6.52	294	5.96	146	6.29	178	.....	.....	10.71	1514	6.37	264	6.75	340	6.14	218	5.64	121	5.52	103	5.42	88
31	5.71	132	.....	.....	6.00	150	6.29	178	.....	.....	9.33	1030	.....	.....	6.33	256	.....	.....	5.56	109	5.92	174	.....	.....

Monthly Discharge of Nottawasaga River near Nicolston for 1916-7

Drainage Area, 416 Square Miles

Month	Discharge in Second-feet			Discharge in Second-feet per Square Mile			Run-off
	Maximum	Minimum	Mean	Maximum	Minimum	Mean	Depth in Inches on Drainage Area
October ... (1916)	402	65	143	.97	.16	.34	.39
November "	294	140	189	.71	.34	.45	.50
December "	332	118	186	.80	.28	.45	.50
January. (1917)	194	119	165	.47	.29	.40	.46
February	220	128	177	.53	.31	.42	.44
March	4,020	162	991	9.66	.39	2.38	2.74
April	1,447	264	625	3.48	.63	1.50	1.67
May	649	128	272	1.56	.31	.65	.75
June.....	356	125	197	.86	.30	.47	.52
July	1,611	109	430	3.88	.26	1.03	1.19
August	174	74	103	.42	.18	.25	.29
September	128	74	97	.31	.18	.23	.26
The year.....	4,020	65	299	9.66	.16	.72	9.76

Rocky Saugeen River near Markdale

Location—At the Glen Cross highway bridge, three-quarters of a mile above Hayward's Falls, near lot 5, concession 8, Township of Glenelg, County of Grey.

Records Available—Discharge measurements and daily gauge heights from June 8, 1915.

Drainage Area—96 square miles.

Gauge—Vertical staff 0 to 6 feet on the downstream side of the centre pier of bridge. The zero of gauge (elevation 0.00) is referred to a B.M. (elevation 29.65) painted on a rock projecting from bank 40 feet north from first telephone pole on left bank.

Channel and Control—The channel is straight for 200 feet above and 500 feet below the station. The bed and banks are permanent, as flood conditions do not exist on this stream.

Discharge Measurements—Made at a permanent wading section. When the river is extremely high measurements will be made from the bridge.

Winter Flow—Ice has but little affect at this section and the open water curve is at all times applicable.

Regulation—The dam above has little effect on the river stage at this section.

Accuracy—The rating curve is well defined except for maximum flows.

Observer—Arthur McNally, Markdale.

Discharge Measurements of Rocky Saugeen River near Markdale in 1916-7

Date	Hydrographer	Width in Feet	Area of Section in Sq. Feet	Mean Velocity in Feet per Sec.	Gauge Height in Feet	Discharge in Sec-Feet	Discharge in Second-feet per Square Mile
1916							
Oct. 4....	Roberts, E.	68	61	.83	1.14	50	.....
1917							
Jan. 7....	"	74	85	1.15	1.50	98	.....
Feb. 15....	Yeates, W....	50	55	1.20	1.31	66	.....
April 12....	Roberts, E.	75	191	1.55	2.54	296	.....
May 9....	"	81	124	1.36	1.96	169	.....
June 14....	"	78	113	1.29	1.77	145	.....
July 20....	"	80	139	1.41	2.04	196	.....
Aug. 3....	"	76	91	1.03	1.52	93	.....
Sept. 16....	Yeates, W....	68	69	.98	1.33	68	.....
Oct. 17....	"	75	87	1.05	1.52	91	.....

Daily Gauge Height and Discharge of Rocky Saugeen River near Markdale for 1916-7

Drainage Area, 96 Square Miles

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge
	Feet	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*
1	1.17	53	1.25	60	1.67	119	1.50	89	1.42	79	1.25	60	3.08	414	2.17	217	1.83	150	1.92	167	1.67	119	1.33	68
2	1.17	53	1.25	60	1.67	119	1.50	89	1.42	79	1.25	60	3.17	433	2.17	217	1.83	150	1.92	167	1.67	119	1.42	79
3	1.17	53	1.25	60	1.67	119	1.50	89	1.42	79	1.25	60	3.25	451	2.08	198	1.83	150	1.92	167	1.67	119	1.42	79
4	1.17	53	1.33	68	1.83	150	1.58	103	1.42	79	1.25	60	3.08	414	2.08	198	1.75	135	2.00	182	1.67	119	1.42	79
5	1.17	53	1.33	68	2.17	217	1.58	103	1.42	79	1.25	60	3.08	414	2.08	198	1.75	135	2.08	198	1.58	103	1.42	79
6	1.17	53	1.33	68	2.17	217	1.50	89	1.42	79	1.25	60	3.00	396	2.08	198	1.75	135	2.08	198	1.58	103	1.42	79
7	1.17	53	1.33	68	2.08	198	1.50	89	1.42	79	1.25	60	2.92	378	2.08	198	1.83	150	2.08	198	1.58	103	1.33	68
8	1.17	53	1.33	68	2.00	182	1.50	89	1.42	79	1.25	60	2.83	359	2.08	198	1.75	135	2.17	217	1.58	103	1.33	68
9	1.17	53	1.33	68	2.00	182	1.50	89	1.42	79	1.33	68	2.67	323	2.00	182	1.75	135	2.50	286	1.50	89	1.33	68
10	1.17	53	1.33	68	2.00	182	1.50	89	1.42	79	1.33	68	2.67	323	2.00	182	1.75	135	2.67	323	1.50	89	1.33	68
11	1.17	53	1.33	68	1.92	167	1.50	89	1.42	79	1.33	68	2.58	304	2.00	182	1.75	135	2.75	341	1.50	89	1.33	68
12	1.17	53	1.33	68	1.92	167	1.58	103	1.42	79	1.33	68	2.50	286	1.96	174	1.75	135	2.75	341	1.50	89	1.33	68
13	1.33	67	1.33	68	1.75	135	1.58	103	1.42	79	1.33	68	2.50	286	1.92	167	1.75	135	2.83	359	1.58	103	1.33	68
14	1.25	59	1.33	68	1.58	103	1.50	89	1.33	68	1.33	68	2.50	286	1.92	167	1.75	135	2.75	341	1.58	103	1.33	68
15	1.25	59	1.33	68	1.58	103	1.50	89	1.25	60	1.33	68	2.42	269	1.83	150	1.75	135	2.58	304	1.50	89	1.33	68
16	1.25	59	1.33	68	1.58	103	1.50	89	1.25	60	1.33	68	2.50	286	1.83	150	1.75	135	2.58	304	1.50	89	1.33	68
17	1.25	59	1.33	68	1.58	103	1.50	89	1.25	60	1.33	68	2.58	304	1.83	150	1.75	135	2.42	269	1.50	89	1.25	60
18	1.25	59	1.33	68	1.58	103	1.50	89	1.25	60	1.42	79	2.58	304	1.83	150	1.75	135	2.42	269	1.50	89	1.25	60
19	1.33	67	1.33	68	1.58	103	1.50	89	1.25	60	1.42	79	2.67	323	1.83	150	1.92	167	2.25	233	1.50	89	1.25	60
20	1.33	67	1.33	68	1.50	89	1.42	79	1.25	60	1.50	89	2.83	359	1.83	150	2.08	198	2.17	217	1.42	79	1.25	60
21	1.42	78	1.25	60	1.50	89	1.42	79	1.25	60	1.50	89	2.83	359	1.75	135	2.08	198	2.08	198	1.42	79	1.25	60
22	1.42	78	1.25	60	1.50	89	1.42	79	1.25	60	1.58	103	2.83	359	1.75	135	2.08	198	2.08	198	1.42	79	1.25	60
23	1.33	67	1.25	60	1.50	89	1.33	68	1.25	60	1.67	119	2.75	341	1.83	150	2.08	198	2.00	182	1.33	68	1.25	60
24	1.33	67	1.25	60	1.50	89	1.33	68	1.25	60	1.75	135	2.75	341	2.08	198	2.08	198	1.83	150	1.25	60	1.25	60
25	1.33	67	1.33	68	1.50	89	1.33	68	1.25	60	1.75	135	2.67	323	2.08	198	2.08	198	1.83	150	1.25	60	1.25	60
26	1.25	59	1.33	68	1.50	89	1.33	68	1.25	60	2.58	304	2.67	323	2.00	182	2.08	198	1.83	150	1.17	54	1.25	60
27	1.25	59	1.33	68	1.50	89	1.33	68	1.25	60	3.00	396	2.50	286	2.00	182	2.00	182	1.79	142	1.17	54	1.25	60
28	1.25	59	1.42	79	1.50	89	1.33	68	1.25	60	2.92	378	2.50	286	1.92	167	1.92	167	1.75	135	1.33	68	1.33	68
29	1.25	59	1.58	103	1.50	89	1.42	79	.....	....	2.92	378	2.33	250	1.92	167	1.92	167	1.75	135	1.33	68	1.33	68
30	1.25	59	1.67	119	1.50	89	1.42	79	.....	....	2.92	378	2.17	217	1.92	167	1.92	167	1.67	119	1.33	68	1.33	68
31	1.25	59	.....	....	1.50	89	1.42	79	.....	....	3.00	396	.....	....	1.92	167	....	....	1.67	119	1.33	68	.....	....

Monthly Discharge of Rocky Saugeen River near Markdale for 1916-7

Drainage Area, 96 Square Miles

Month	Discharge in Second-feet			Discharge in Second-feet per Square Mile			Run-off
	Maximum	Minimum	Mean	Maximum	Minimum	Mean	Depth in Inches on Drainage Area
October (1916)	78	53	59	.81	.55	.61	.70
November "	119	60	69	1.24	.62	.72	.80
December "	217	89	124	2.26	.93	1.29	1.49
January (1917)	103	68	85	1.07	.71	.89	1.03
February	79	60	69	.82	.62	.72	.75
March	396	60	134	4.13	.62	1.40	1.61
April	451	217	333	4.70	2.26	3.47	3.87
May	217	135	175	2.26	1.41	1.82	2.10
June	198	135	158	2.06	1.41	1.65	1.84
July	359	119	218	3.74	1.24	2.27	2.62
August	119	54	87	1.24	.56	.91	1.05
September	79	60	67	.82	.62	.70	.78
The year	451	53	132	4.70	.55	1.37	18.66

Saugeen River near Port Elgin

Location—At the highway bridge known as McCalder's Bridge, 4 miles north-east of the Town of Port Elgin, near lot 5, concession 12, Township of Saugeen, County of Bruce.

Records Available—Discharge measurements from July, 1911. Daily gauge heights from April 19, 1914.

Drainage Area—1,565 square miles.

Gauge—Vertical staff 0 to 12 feet on left abutment downstream side. Zero on gauge (elevation 4.00) is referred to a B.M. (elevation 25.00) painted on wooden hand-rail of bridge.

Channel and Control—The channel is straight for about 350 feet above and below the section. The bed of the stream, with two submerged piers at the section, is composed of fairly large boulders, which will only shift during high flood stages. The current is moderate and flows through two channels, which are separated by the centre pier of the bridge.

Discharge Measurements—Made from the bridge at all stages.

Winter Flow—Ice greatly affects relation of gauge height to discharge. Measurements are made during the winter to determine the flow.

Regulation—Fluctuations occur in the river stage at this section. This is no doubt caused by the plants at Walkerton, Chesley and Paisley.

Accuracy—Semi-daily reading should give a fair representative mean. The fluctuations that have been noted are not large, consequently the gauge height records can be classified as good. A well-defined curve is shown for flows up to 20,000 sec. feet. A slight angle in cross-section No. 1 may affect accuracy of meter measurements.

Observer—John Shanks, Southampton.

Discharge Measurements of Saugeen River near Port Elgin in 1916-7

Date	Hydrographer	Width in Feet	Area of Section in Sq. Feet	Mean Velocity in Feet per Sec.	Gauge Height in Feet	Discharge in Sec-Feet	Discharge in Second-feet per Square Mile
1916							
Oct. 5....	Yeates, W.....	191	673	.65	4.79	436	.....
1917							.....
Jan. 9....	Roberts, E.	197	904	1.70	6.58	1,533(a)	.....
Mar. 25....	"	210	2,326	5.71	12.87	13,285(b)	.....
" 26....	"	210	2,725	7.28	14.74	19,850(b)	.....
" 27....	"	210	2,796	7.55	15.08	21,113(b)	.....
" 28....	"	210	2,660	6.88	14.42	18,313(b)	.....
" 28....	"	210	2,630	6.77	14.29	17,797(b)	.....
" 29....	"	210	2,452	6.23	13.50	15,265(b)	.....
" 29....	"	210	2,357	5.91	13.00	13,936(b)	.....
Apr. 19....	"	210	1,233	2.33	7.62	2,872	.....
May 11....	"	197	1,004	1.73	6.56	1,742	.....
June 13....	"	195	906	1.58	6.08	1,433	.....
July 19....	"	210	1,271	2.66	7.85	3,387	.....
Aug. 2....	"	192	828	1.20	5.66	995	.....
Sept. 15....	Yeates, W.....	190	714	.85	5.08	610	.....
Oct. 16....	"	192	809	1.10	5.54	890	.....

(a) Section almost completely ice-covered.
(b) Surface velocities recorded and co-efficient applied.

Daily Gauge Height and Discharge of Saugeen River near Port Elgin for 1916-7

Drainage Area, 1,565 Square Miles

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge
	Feet	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*
1	5.02	540	5.25	730	7.64	2870	6.83	1760	6.39	760	6.58	750	11.42	9220	7.67	2900	6.46	1700	8.00	3300	5.73	1110	5.29	760
2	4.98	520	5.29	760	7.08	2270	6.77	1710	6.35	730	6.69	840	11.56	9540	8.42	3830	6.42	1670	11.46	9310	5.64	1040	5.21	700
3	4.89	476	5.33	790	6.89	2080	6.60	1570	6.33	715	6.58	750	12.42	11790	8.37	3760	6.29	1560	11.25	8840	5.64	1040	5.21	700
4	4.83	452	5.25	730	6.64	1860	6.56	1540	6.25	655	6.58	750	11.71	9900	7.87	3140	6.25	1530	10.67	7580	5.67	1070	5.19	685
5	4.79	436	5.23	715	7.98	3280	6.48	1470	6.23	640	6.48	610	11.29	8930	7.58	2800	6.25	1530	10.04	6360	5.64	1040	5.17	670
6	4.75	422	5.19	685	8.00	3300	6.42	1430	6.23	640	6.50	690	11.33	9020	7.46	2670	6.17	1470	9.00	4640	5.60	1010	5.14	650
7	4.75	422	5.17	670	7.50	2710	6.50	1490	6.27	670	6.50	690	10.58	7400	7.31	2500	6.50	1730	7.75	3000	5.79	1160	5.17	670
8	4.73	415	5.06	590	7.35	2540	6.54	1520	6.25	655	6.52	710	10.08	6430	7.08	2270	6.42	1670	7.62	2840	5.81	1180	5.17	670
9	4.69	402	5.06	590	7.31	2400	6.54	1520	6.19	610	6.54	720	10.00	6290	6.87	2060	6.37	1630	8.96	4580	5.77	1150	5.14	650
10	4.56	365	5.08	605	7.33	2420	6.52	1430	6.17	600	6.58	750	9.81	5950	6.62	1840	6.31	1580	10.79	7830	5.64	1040	5.10	620
11	4.52	355	5.08	605	7.14	2230	6.34	1280	6.17	530	6.85	970	9.67	5700	6.52	1750	6.25	1530	11.33	9020	5.60	1010	5.10	620
12	4.52	355	5.10	620	6.87	1970	6.19	1080	6.23	570	7.31	1340	9.29	5080	6.39	1640	6.17	1470	11.12	8550	5.56	980	5.06	590
13	4.85	460	5.14	650	6.54	1680	6.21	1100	6.25	585	7.96	1870	9.12	4820	6.31	1580	6.12	1430	10.50	7240	5.50	930	5.04	580
14	4.87	468	5.17	670	6.14	1360	6.36	1220	6.21	560	8.44	2330	9.00	4640	6.21	1500	6.75	1960	9.62	5610	5.46	900	5.00	550
15	4.96	510	5.17	670	5.83	1110	6.37	1150	6.19	545	8.42	2210	8.62	4100	6.00	1330	6.64	1860	8.83	4390	5.44	880	5.00	550
16	5.10	580	5.17	670	5.92	1190	6.42	1190	6.17	530	8.37	2160	8.37	3760	5.98	1310	6.54	1770	8.42	3830	5.42	870	5.00	550
17	5.19	635	5.19	685	6.12	1350	6.46	1140	6.14	510	8.60	2290	8.21	3550	5.94	1280	6.29	1560	8.25	3600	5.42	870	5.00	550
18	5.29	695	5.21	700	6.31	1500	6.50	1170	6.17	530	9.17	2790	7.92	3200	5.94	1280	6.21	1500	8.21	3550	5.39	840	5.00	550
19	5.44	785	5.23	715	6.48	1630	6.50	1170	6.17	530	9.12	2620	7.64	2870	5.89	1240	6.17	1470	7.71	2950	5.35	810	5.00	550
20	5.46	795	5.27	745	6.44	1520	6.50	1090	6.17	530	9.04	2430	8.46	3880	5.87	1230	6.71	1920	7.37	2570	5.31	780	5.00	550
21	5.50	820	5.27	745	6.51	1580	6.50	1090	6.10	480	9.12	2410	8.67	4170	5.85	1210	7.33	2520	7.17	2360	5.29	760	5.00	550
22	5.54	850	5.25	730	6.56	1620	6.48	990	6.08	470	9.44	2640	8.58	4040	5.83	1190	6.92	2110	6.96	2150	5.27	750	4.98	535
23	5.48	810	5.27	745	6.64	1680	6.46	980	6.04	440	11.83	7920	8.54	3990	7.21	2400	6.75	1960	6.81	2010	5.25	730	4.92	495
24	5.42	770	5.31	780	6.54	1600	6.42	950	6.08	470	12.17	9800	8.52	3960	8.89	4480	7.29	2480	6.52	1750	5.31	780	4.87	460
25	5.39	755	5.33	795	6.48	1550	6.48	910	6.17	530	13.67	14920	8.46	3880	8.96	4580	7.44	2640	6.35	1610	5.54	960	4.83	430
26	5.33	720	5.42	870	6.48	1550	6.54	960	6.17	460	13.92	16450	8.42	3830	8.35	3740	7.14	2330	6.27	1550	5.58	990	4.77	390
27	5.29	695	5.83	1190	6.50	1570	6.56	900	6.27	530	15.00	20760	7.92	3200	8.02	3320	7.50	2710	6.14	1440	5.54	960	4.75	375
28	5.39	755	6.96	2150	6.55	1610	6.50	850	6.39	610	14.39	18220	7.37	2570	7.42	2620	7.25	2440	6.12	1430	5.46	900	4.75	375
29	5.35	730	7.39	2590	6.71	1740	6.44	800	.....	....	13.21	14100	7.17	2360	7.10	2290	7.50	2710	5.98	1310	5.29	760	4.75	375
30	5.31	705	7.77	3020	6.67	1630	6.42	790	.....	....	11.83	10210	6.87	2060	6.77	1970	7.62	2840	5.85	1210	5.37	830	4.96	520
31	5.25	670	....	....	6.69	1640	6.42	790	.....	....	11.08	8470	.....	.....	6.54	1770	....	.....	5.79	1160	5.37	830	.....	....

Monthly Discharge of Saugeen River near Port Elgin for 1916-7

Drainage Area, 1,565 Square Miles

Month	Discharge in Second-feet			Discharge in Second-feet per Square Mile			Run-off
	Maximum	Minimum	Mean	Maximum	Minimum	Mean	Depth in Inches on Drainage Area
October (1916)	850	355	593	.54	.23	.38	.44
November "	3,020	590	907	1.93	.38	.58	.65
December "	3,300	1,110	1,905	2.11	.71	1.22	1.41
January (1917)	1,760	790	1,195	1.12	.50	.76	.88
February	760	440	574	.49	.28	.37	.39
March.....	20,760	610	4,973	13.27	.39	3.18	3.67
April.....	11,790	2,060	5,338	7.53	1.32	3.41	3.80
May	4,580	1,190	2,306	2.93	.76	1.47	1.69
June	2,840	1,430	1,909	1.81	.91	1.22	1.36
July.....	9,310	1,160	4,115	5.95	.73	2.63	3.03
August	1,180	730	934	.75	.47	.60	.67
September.....	760	375	564	.49	.24	.36	.40
The year	20,760	355	2,121	13.27	.23	1.35	18.39

Saugeen River near Walkerton

Location—At the south line bridge, 3½ miles above the Town of Walkerton, near lot 39, concession 2, Township of Brant, County of Bruce.

Records Available—Discharge measurements from June, 1912. Daily gauge heights from March 26, 1914.

Drainage Area—850 square miles.

Gauge—Vertical staff 0 to 12 feet on right abutment. Zero on the gauge is 12.00 feet, which is referred to a B.M. (elevation 35.00) on tension rod of bridge.

Channel and Control—Channel is straight for about 500 feet above and below the section. Both banks are high, and do not overflow. The river bed is composed of clay, one channel existing at all stages.

Discharge Measurements—Made from the bridge at all stages.

Winter Flow—Ice greatly affects relation of gauge height to discharge. Measurements are made to determine the winter flow.

Regulation—The dam at Walkerton, about 3½ miles downstream, has no effect on the river stage at this section.

Accuracy—Weeds below the section have a decided effect on the accuracy of the measurements. During the period when weeds are present, a different rating curve has been established. There are not sufficient records available to define the two curves at all stages, and therefore discharges cannot be classed as very good.

Observer—James Preston, Walkerton.

Discharge Measurements of Saugeen River near Walkerton in 1916-7

Date	Hydrographer	Width in Feet	Area of Section in Sq. Feet	Mean Velocity in Feet per Sec.	Gauge Height in Feet	Discharge in Sec-Feet	Discharge in Second-feet per Square Mile
1916							
Oct. 4....	Yeates, W.	119	436	.54	15.08	234	.....
1917							
Jan. 9....	Roberts, E.....	120	511	1.28	16.33	653 (a)	.....
" 26....	"	120	463	1.07	16.21	494 (a)	.....
Feb. 23....	"	115	455	1.07	16.71	486 (a)	.....
Mar. 27....	"	135	2000	6.45	26.90	12,900 (b)	.....
April 18....	"	132	745	1.94	17.58	1,443	.....
May 10....	"	125	626	1.63	16.70	1,018	.....
June 13....	"	117	539	1.18	15.96	638	.....
July 20....	"	128	727	2.03	17.50	1,478	.....
Aug. 4....	"	114	505	1.06	15.67	537	.....
Sept. 16....	Yeates, W.	111	459	.75	15.29	344	.....
Oct. 18....	"	113	483	.82	15.45	396	.....

(a) Ice measurement.
(b) Surface velocities recorded and co-efficient applied.

Daily Gauge Height and Discharge of Saugeen River near Walkerton for 1916-7

Drainage Area, 850 Square Miles

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge
	Feet	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*
1	15.12	246	15.46	374	17.83	1700	16.25	635	16.25	462	16.92	590	21.73	5340	17.25	1300	16.29	765	19.87	3410	15.67	458	15.25	290
2	15.29	297	15.33	322	17.42	1410	16.25	630	16.29	470	16.71	485	22.87	6690	17.62	1550	16.17	705	21.58	5180	15.71	475	15.37	338
3	15.21	273	15.42	358	16.83	1040	16.33	670	16.17	422	16.62	446	23.62	7630	17.71	1620	16.12	680	19.94	3480	15.58	422	15.35	330
4	15.12	246	15.50	390	16.46	850	16.21	605	16.33	470	16.62	446	23.21	7100	17.56	1510	16.08	660	18.83	2470	15.50	390	15.42	358
5	15.25	255	15.46	374	17.08	1180	16.17	585	16.37	470	16.71	485	21.54	5130	17.37	1380	16.04	640	17.79	1670	15.50	390	15.35	330
6	15.21	273	15.37	338	17.62	1550	16.12	555	16.46	520	16.73	495	20.87	4410	17.29	1320	16.04	640	17.21	1270	15.92	580	15.21	274
7	15.21	273	15.33	322	17.62	1550	16.29	640	16.54	530	16.83	545	20.42	3960	17.12	1200	16.08	660	16.92	1080	15.96	600	15.17	258
8	15.12	246	15.37	338	17.25	1300	16.37	675	16.46	480	16.83	545	19.50	3070	16.96	1110	16.46	850	18.42	2130	15.79	515	15.21	274
9	15.04	222	15.46	374	17.12	1140	16.37	675	16.46	470	16.83	545	19.00	2620	16.79	1020	16.50	870	18.92	2550	15.81	525	15.17	258
10	15.04	222	15.50	390	17.25	1230	16.29	630	16.54	500	16.75	505	18.52	2210	16.67	955	16.46	850	20.29	3830	15.52	398	15.21	274
11	15.25	255	15.46	374	17.12	1140	16.12	560	16.46	446	16.96	610	18.54	2220	16.64	940	16.29	765	20.54	4080	15.56	414	15.23	282
12	15.04	222	15.42	358	16.92	1030	16.37	670	16.33	406	17.58	920	18.58	2250	16.50	870	16.04	640	20.62	4160	15.54	406	15.19	266
13	15.29	297	15.58	422	16.37	755	16.17	530	16.50	462	17.75	1000	18.67	2330	16.33	785	15.92	580	19.92	3460	15.50	390	15.21	274
14	15.37	328	15.42	358	15.96	550	16.08	510	16.50	454	17.96	1120	18.71	2360	16.29	765	16.19	715	19.58	3140	15.48	382	15.12	238
15	15.29	297	15.37	338	15.83	485	16.29	610	16.54	458	17.71	985	18.25	2000	16.21	725	16.42	830	19.67	3220	15.52	398	15.21	274
16	15.37	328	15.46	374	15.29	266	16.29	605	16.50	442	17.67	965	17.87	1730	16.04	640	16.35	795	19.17	2770	15.48	382	15.12	238
17	15.46	364	15.42	358	16.04	590	16.21	555	16.62	470	18.12	1220	17.62	1550	15.96	600	16.08	660	18.50	2190	15.39	346	15.08	222
18	15.50	380	15.42	358	16.17	655	16.25	570	16.46	454	18.04	1170	17.54	1500	15.92	580	15.98	610	17.96	1790	15.50	390	15.10	230
19	15.58	412	15.25	290	16.25	645	16.29	580	16.42	442	17.96	1120	17.54	1500	15.96	600	17.42	1410	17.58	1530	15.44	366	15.21	274
20	15.71	470	15.33	322	16.46	750	16.33	600	16.50	430	17.96	1120	18.33	2050	16.54	890	17.75	1650	17.42	1410	15.33	322	15.17	258
21	15.79	505	15.25	290	16.50	770	16.21	535	16.58	462	17.79	1020	19.50	3070	16.62	930	17.25	1300	17.29	1320	15.37	338	15.12	238
22	15.75	487	15.25	290	16.50	770	16.25	560	16.54	458	18.29	1465	19.58	3140	16.75	995	16.71	975	17.00	1130	15.33	322	15.17	258
23	15.67	433	15.29	306	16.17	605	16.33	565	16.69	475	19.50	2530	19.29	2880	17.62	1550	16.46	850	16.71	975	15.46	374	15.14	246
24	15.54	396	15.62	438	16.21	625	16.37	575	16.62	446	20.23	3370	18.54	2220	18.12	1900	17.54	1500	16.50	870	15.73	485	15.04	206
25	15.50	380	15.62	438	16.04	540	16.33	545	16.46	382	20.62	3960	17.98	1810	18.60	2270	17.46	1440	16.29	765	15.77	505	15.10	230
26	15.54	396	15.54	406	16.17	605	16.33	555	16.71	485	27.00	13130	17.64	1570	18.54	2220	17.69	1600	16.12	680	15.69	466	15.12	238
27	15.37	328	15.75	495	16.29	665	16.29	530	16.83	545	27.00	13130	17.58	1530	17.75	1650	17.79	1670	16.12	680	15.58	422	15.14	246
28	15.42	348	15.92	580	16.29	665	16.21	470	16.87	565	26.12	11440	17.42	1410	17.25	1300	17.37	1380	15.96	600	15.50	390	15.27	298
29	15.37	328	16.42	830	16.21	620	16.21	462	.....	.....	24.54	8890	17.46	1440	16.79	1020	17.33	1350	15.83	535	15.52	398	15.33	322
30	15.33	312	17.83	1700	16.12	575	16.42	560	.....	.....	21.42	5000	17.23	1280	16.50	870	17.46	1440	15.83	535	15.37	338	15.35	330
31	15.46	364	.....	.....	16.12	570	16.29	490	.....	.....	20.96	4500	.....	....	16.33	785	.....	.....	15.69	466	15.37	338	.....	....

Monthly Discharge of Saugeen River near Walkerton for 1916-7

Drainage Area, 850 Square Miles

Month	Discharge in Second-feet			Discharge in Second-feet per Square Mile			Run-off
	Maximum	Minimum	Mean	Maximum	Minimum	Mean	Depth in Inches on Drainage Area
October .. (1916)	505	222	328	.59	.26	.39	.45
November "	1,700	290	430	2.00	.34	.51	.57
December "	1,700	266	866	2.00	.31	1.02	1.18
January .. (1917)	675	462	579	.79	.54	.68	.78
February	565	382	467	.66	.45	.55	.57
March	13,130	446	2,705	15.45	.52	3.18	3.67
April	7,630	1,280	2,933	8.98	1.51	3.45	3.85
May.....	2,270	580	1,156	2.67	.68	1.36	1.57
June.....	1,670	610	983	1.96	.72	1.16	1.29
July.....	5,180	466	2,045	6,09	.55	2.41	2.78
August.....	600	322	418	.71	.38	.49	.56
September.....	358	206	272	.42	.24	.32	.36
The year	13,130	206	1,103	15.45	.24	1.29	17.62

Sydenham River near Owen Sound

Location—At the highway bridge above the Town of Owen Sound's filtration plant, near lot 9, concession 1, Township of Derby, County of Grey.

Records Available—Discharge measurements and daily gauge heights from June 9, 1915.

Drainage Area—71 square miles.

Gauge—Vertical staff 0 to 6 feet on upstream side of first pier from right abutment. Zero on the gauge is 0.00.

Channel and Control—The channel is straight for 200 feet above and below the section, both banks are low, but do not overflow, the stream never assuming flood proportions. The bed is composed of solid rock, with two channels during the low-water period. During the high-water stages all the water is confined between the two abutments of the bridge.

Discharge Measurements—Made from the bridge during the high-water period, and from a permanent wading section located 30 feet upstream during the low stages.

Winter Flow—Ice has little effect.

Regulation—The Town of Owen Sound has a dam 300 feet above this section that is used to supply water for domestic uses.

Diversions—An additional 750,000 gallons of water per day should be added to the daily flow at this section, which is the approximate amount diverted.

Accuracy—There are not sufficient readings to define a curve at all stages. Discharges between gauge heights .90 and 1.40 are fair.

Observer—Myrtle Cook, Ashley P.O.

Discharge Measurements of Sydenham River near Owen Sound in 1916-7

Date	Hydrographer	Width in Feet	Area of Section in Sq. Feet	Mean Velocity in Feet per Sec.	Gauge Height in Feet	Discharge in Sec-Feet	Discharge in Second-feet per Square Mile
1916							
Oct. 4....	Yeates, W....	46	19	.91	.92	18	.....
1917							
Jan. 6....	Roberts, E....	57	36	2.02	1.35	74	.....
Feb. 17....	Yeates, W.....	39	22	1.42	1.67	31(a)	.....
Mar. 23....	Roberts, E.....	69	81	2.95	1.96	240(b)	.....
Apr. 11....	"	65	75	3.46	1.87	261	.....
May 9....	"	61	49	2.29	1.50	112	.....
June 14....	"	61	49	2.21	1.50	108	.....
July 16....	"	63	59	2.57	1.67	151	.....
Aug. 2....	"	45	28	1.60	1.17	45	.....
Sept. 15....	Yeates, W.....	48	23	1.13	0.98	25	.....
Oct. 17....	"	45	26	1.28	1.10	33	.....

(a) Ice measurement.
(b) Some ice at sides of section.

Daily Gauge Height and Discharge of Sydenham River near Owen Sound for 1916-7

Drainage Area, 71 Square Miles

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge
	Feet	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*
1	1.00	26	1.04	30	1.67	157	1.33	69	1.79	45	1.87	57	2.29	523	1.67	157	1.33	69	1.54	115	1.17	45	1.04	30
2	0.92	19	1.04	30	1.92	283	1.33	69	1.83	51	1.92	64	2.33	550	1.67	157	1.33	69	1.67	157	1.17	45	1.04	30
3	0.92	19	1.08	34	1.83	229	1.33	69	1.79	45	2.00	78	2.37	576	1.75	190	1.33	69	1.75	190	1.17	45	1.04	30
4	0.87	15	1.08	34	1.75	190	1.33	69	1.75	40	1.96	71	2.42	608	1.71	172	1.29	63	1.75	190	1.12	39	1.04	30
5	0.87	15	1.04	30	1.67	157	1.33	69	1.75	40	1.92	64	2.37	576	1.67	157	1.29	63	1.62	139	1.12	39	1.00	26
6	0.87	15	1.04	30	1.67	157	1.33	69	1.83	51	1.87	57	2.33	550	1.62	139	1.33	69	1.50	104	1.12	39	1.00	26
7	0.87	15	1.04	30	1.67	157	1.33	61	1.75	40	1.83	51	2.29	523	1.58	126	1.42	86	1.50	104	1.12	39	1.00	26
8	0.92	19	1.04	30	1.67	157	1.33	53	1.67	31	1.83	51	2.21	471	1.50	104	1.50	104	1.75	190	1.12	39	1.00	26
9	0.92	19	1.08	34	1.67	157	1.37	52	1.62	26	1.79	45	2.08	387	1.50	104	1.50	104	2.08	387	1.08	34	1.00	26
10	0.92	19	1.08	34	1.67	157	1.42	52	1.58	22	1.75	40	1.96	309	1.50	104	1.50	104	2.67	771	1.08	34	1.00	26
11	0.92	19	1.08	34	1.67	157	1.46	51	1.71	35	1.87	57	1.92	283	1.46	95	1.46	95	2.62	738	1.08	34	1.00	26
12	0.92	19	1.08	34	1.62	139	1.50	49	1.79	45	1.83	51	1.87	253	1.42	86	1.37	77	2.50	660	1.08	34	1.00	26
13	0.96	22	1.04	30	1.62	139	1.46	37	1.83	51	1.79	45	1.83	229	1.42	86	1.42	86	2.33	550	1.08	34	1.00	26
14	1.00	26	1.04	30	1.58	126	1.46	32	1.67	31	1.79	45	1.83	229	1.37	77	1.54	115	2.12	413	1.12	39	1.00	26
15	1.00	26	1.04	30	1.54	115	1.42	23	1.58	22	1.83	51	1.83	229	1.37	77	1.58	126	2.00	335	1.12	39	1.00	26
16	1.00	26	1.08	34	1.50	104	1.42	19	1.58	22	1.87	57	1.79	208	1.37	77	1.58	126	1.87	253	1.12	39	1.00	26
17	1.04	30	1.08	34	1.46	95	1.46	18	1.62	26	1.83	51	1.71	172	1.33	69	1.50	104	1.79	208	1.12	39	0.96	22
18	1.04	30	1.08	34	1.46	95	1.50	17	1.67	31	1.83	51	1.67	157	1.33	69	1.46	95	1.75	190	1.08	34	0.96	22
19	1.08	35	1.08	34	1.42	86	1.54	19	1.71	35	1.79	63	1.67	157	1.33	69	1.50	104	1.67	157	1.08	34	0.96	22
20	1.12	40	1.08	34	1.37	77	1.50	16	1.75	40	1.79	80	1.75	190	1.33	69	1.50	104	1.62	139	1.08	34	0.96	22
21	1.17	46	1.08	34	1.33	69	1.71	35	2.00	78	1.83	112	1.87	253	1.29	63	1.46	95	1.54	115	1.08	34	0.96	22
22	1.17	46	1.08	34	1.29	63	1.83	51	1.87	57	1.83	143	2.00	335	1.33	69	1.46	95	1.50	104	1.08	34	0.96	22
23	1.17	46	1.08	34	1.29	63	2.04	86	1.75	40	2.21	406	1.96	309	1.46	95	1.50	104	1.50	104	1.08	34	0.96	22
24	1.12	40	1.08	34	1.25	57	1.96	71	1.75	40	2.50	660	1.83	229	1.54	115	1.50	104	1.42	86	1.12	39	0.96	22
25	1.08	35	1.08	34	1.25	57	1.83	51	1.79	45	2.67	771	1.75	190	1.67	157	1.50	104	1.37	77	1.17	45	0.96	22
26	1.08	35	1.12	39	1.25	57	1.75	40	1.83	51	2.71	796	1.75	190	1.67	157	1.50	104	1.33	69	1.17	45	0.96	22
27	1.04	30	1.21	51	1.25	57	1.67	31	1.71	35	2.75	822	1.71	172	1.58	126	1.46	95	1.29	63	1.17	45	0.96	22
28	1.04	30	1.33	69	1.29	63	2.04	86	1.75	40	2.75	822	1.67	157	1.50	104	1.42	86	1.25	57	1.12	39	0.96	22
29	1.04	30	1.42	86	1.29	63	1.83	51	....	...	2.58	712	1.62	139	1.42	86	1.46	95	1.25	57	1.08	34	0.96	22
30	1.00	26	1.50	104	1.33	69	1.62	26	....	...	2.25	497	1.62	139	1.37	77	1.50	104	1.21	51	1.08	34	1.00	26
31	1.00	26	....	...	1.33	69	1.67	31	....	...	2.25	497	....	...	1.37	77	....	...	1.17	45	1.04	30	....	...

Monthly Discharge of Sydenham River near Owen Sound for 1916-7

Drainage Area, 71 Square Miles

Month	Discharge in Second-feet			Discharge in Second-feet per Square Mile			Run-off
	Maximum	Minimum	Mean	Maximum	Minimum	Mean	Depth in Inches on Drainage Area
October. ..(1916)	46	15	27	.65	.23	.38	.44
November "	104	30	39	1.47	.42	.55	.61
December "	283	57	117	3.99	.80	1.65	1.90
January .. (1917)	86	16	47	1.21	.23	.66	.76
February	78	22	40	1.10	.31	.56	.58
March	822	40	238	11.58	.56	3.35	3.86
April.	608	139	310	8.57	1.96	4.37	4.87
May	190	63	107	2.68	.89	1.51	1.74
June.....	126	63	94	1.77	.89	1.32	1.47
July	771	45	220	10.86	.63	3.10	3.57
August	45	30	38	.63	.42	.54	.62
September	30	22	25	.42	.31	.35	.39
The year	822	15	109	11.58	.23	1.53	20.83

Thames River (Main Stream) near Byron

Location—At the highway bridge known as Kilworth Bridge, 2 miles north-west of the Town of Byron, near the Village of Komoka, Township of Delaware, County of Middlesex.

Records Available—Monthly discharge measurements from March, 1912. Daily gauge heights from March 13, 1914.

Drainage Area—1,270 square miles.

Gauge—Vertical staff 0 to 12 feet on centre pier. The zero on gauge (elevation 6.00), which has remained unchanged since established, is referred to a B.M. (elevation 31.21) on downstream side of right abutment.

Channel and Control—The channel is straight above and below section for about 600 feet. The banks are high, and do not overflow or shift to a great extent. The control, however, is not stationary under high-water conditions. The velocity is high.

Discharge Measurements—Made from the bridge at all stages.

Winter Flow—Ice is present during the winter period, and measurements are made to determine the winter flow.

Accuracy—During flood stages the high velocity necessitates the taking of surface readings. The station rating curve is fairly well defined for ordinary flows.

Observer—James Bourne, Komoka.

Discharge Measurements of Thames River (Main Stream) near Byron in 1917

Date	Hydrographer	Width in Feet	Area of Section in Sq. Feet	Mean Velocity in Feet per Sec.	Gauge Height in Feet	Discharge in Sec-Feet	Discharge in Second-feet per Square Mile
1917							
Mar. 8....	Roberts, E.....	105	204	3.42	8.58	699(a)	.....
" 13....	"	241	1,126	5.48	10.62	6,178(b)	.....
" 25....	Yeates, W.	254	1,996	7.16	14.08	14,294(b)	.....
" 26....	"	250	1,594	6.46	12.52	10,294(b)	.....
" 27....	"	243	1,272	5.63	11.21	7,155(b)	.....
" 28....	"	241	1,175	5.57	10.79	6,548(b)	.....
May 15....	"	203	309	2.10	6.98	620	.....
June 19....	Roberts, E.....	207	391	3.00	7.37	1,173	.....
July 4....	Yeates, W.....	232	635	3.06	8.48	2,578	.....
Aug. 16....	Roberts, E.....	192	215	1.22	6.52	263	.....
Oct. 24....	Yeates, W	201	290	2.04	6.89	590	.....

(a) Ice measurement taken above regular section.
(b) Surface velocities recorded and co-efficient applied. Heavy swell at gauge.

Daily Gauge Height and Discharge of Thames River (Main Stream) near Byron for 1916-7

Drainage Area, 1,270 Square Miles

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge
	Feet	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*
1	6.46	208	6.46	185	7.08	835	7.42	875	8.04	215	9.00	1205	9.33	3780	7.25	1030	7.87	1770	7.75	1630	6.54	265	6.33	55
2	6.42	176	6.50	225	6.87	600	7.42	655	8.00	175	8.67	820	11.21	7310	7.75	1630	7.96	1880	11.08	7030	6.46	185	6.46	185
3	6.42	176	6.50	225	6.67	395	7.42	655	7.92	95	8.58	725	12.46	10170	8.67	2800	7.62	1470	9.54	4120	6.67	395	6.50	225
4	6.37	142	6.50	225	6.75	475	7.42	655	7.50	0	8.58	725	10.29	5450	7.92	1830	7.42	1230	8.46	2510	6.50	225	6.50	225
5	6.33	118	6.42	145	6.67	395	7.71	975	7.50	0	8.58	725	9.42	3930	7.58	1420	7.33	1120	7.87	1770	6.50	225	6.46	185
6	6.33	118	6.42	145	6.67	395	8.17	1530	7.71	0	8.42	545	11.04	6950	7.42	1230	7.62	1470	7.50	1320	6.62	345	6.42	145
7	6.33	118	6.37	95	6.75	475	9.04	1430	7.79	10	8.50	635	11.25	7390	7.50	1320	10.50	5850	7.17	930	6.62	345	6.54	265
8	6.33	118	6.33	55	6.75	475	8.96	1300	7.58	0	8.50	635	10.33	5520	7.33	1120	9.96	4850	7.25	1030	6.62	395	6.54	265
9	6.25	75	6.42	145	6.67	295	8.62	900	7.58	0	8.67	820	8.71	2860	7.29	1070	8.75	2910	8.04	1970	6.50	225	6.54	265
10	6.25	75	6.50	225	6.50	125	8.33	580	7.54	0	8.67	1290	8.37	2400	7.75	1630	8.08	2020	10.79	6420	6.79	515	6.50	225
11	6.25	75	6.46	185	6.58	205	8.17	415	7.25	0	9.33	2610	8.00	1920	7.46	1280	7.58	1420	11.54	8000	6.71	435	6.50	225
12	6.33	118	6.42	145	6.75	375	8.33	580	7.54	0	11.58	7240	8.08	2020	7.29	1070	7.33	1120	9.83	4620	6.67	395	6.33	55
13	6.37	142	6.42	145	6.67	295	8.42	680	7.83	8	10.92	6700	7.92	1830	7.08	835	7.33	1120	8.92	3160	6.71	435	6.50	225
14	6.46	208	6.42	145	6.75	375	8.50	765	7.75	0	10.62	6080	7.71	1580	7.04	790	7.79	1670	8.46	2510	6.62	345	6.33	55
15	6.50	240	6.33	55	7.33	890	8.50	765	7.87	18	9.83	4620	7.37	1170	6.79	515	8.21	2190	8.42	2460	6.58	305	6.50	225
16	6.50	240	6.33	55	7.50	1085	8.42	680	7.67	0	9.33	3780	7.29	1070	6.42	145	7.87	1770	8.42	2460	6.62	345	6.33	55
17	6.46	208	6.42	145	7.50	1085	7.87	45	8.00	125	10.67	6190	7.21	975	6.75	475	7.37	1170	7.67	1530	6.50	225	6.50	225
18	6.42	176	6.54	265	7.67	1290	7.75	0	8.08	205	10.42	5690	7.12	875	6.75	475	7.29	1070	11.37	7640	6.50	225	6.33	55
19	6.46	208	6.42	145	7.75	1385	7.79	10	7.92	45	9.71	4410	6.96	700	6.75	475	7.25	1030	10.96	6780	6.50	225	6.37	95
20	6.62	336	6.33	55	7.75	1385	7.83	20	7.62	0	9.54	4120	7.08	835	7.46	1280	7.12	875	9.50	4050	6.50	225	6.37	95
21	6.75	440	6.33	55	7.33	780	7.67	0	7.83	8	10.00	4920	7.58	1420	8.00	1920	7.04	790	8.62	2730	6.50	225	6.37	95
22	6.71	408	6.37	95	7.25	690	7.62	0	7.87	18	15.08	17950	7.87	1770	7.79	1673	6.92	655	7.96	1880	6.37	95	6.33	55
23	6.58	304	6.50	225	7.25	690	7.92	95	7.83	8	12.67	10710	7.71	1580	10.33	5520	6.79	515	7.71	1580	6.54	265	6.33	55
24	6.50	240	6.58	305	7.25	690	7.87	45	7.83	8	15.71	20030	7.92	1830	11.21	7310	6.83	560	7.42	1230	6.62	345	6.46	185
25	6.50	240	6.50	225	7.33	780	8.04	215	7.83	8	13.83	13970	7.54	1370	12.54	10370	7.04	790	6.92	655	6.58	305	6.33	55
26	6.42	176	6.42	145	7.33	875	7.83	20	7.92	45	12.25	9650	7.42	1230	10.35	5520	7.46	1280	6.75	475	6.50	225	6.29	22
27	6.42	176	6.46	185	7.42	765	7.79	10	8.12	245	11.17	7220	7.46	1280	9.25	3660	11.37	7640	6.87	600	6.54	265	6.42	145
28	6.42	176	6.62	345	7.42	765	7.58	0	8.33	455	10.75	6350	7.37	1170	8.54	2620	10.12	5140	6.92	655	6.33	55	6.33	55
29	6.46	208	6.67	395	7.42	765	7.67	0	.....	.....	10.21	5360	7.17	930	8.21	2190	9.54	4120	6.75	475	6.67	395	6.50	225
30	6.46	208	6.87	600	7.54	900	7.79	10	.....	.....	9.46	3990	7.08	855	7.87	1770	9 71	4410	6.54	265	6.67	395	6.33	55
31	6.50	240	....	.....	7.50	855	7.96	135	.....	.....	8.71	2860	.....	.....	7.62	1470	.....	.....	6.46	185	6.42	145	.....	....

Monthly Discharge of Thames River (Main Stream) near Byron for 1916-7

Drainage Area, 1,270 Square Miles

Month	Discharge in Second-feet			Discharge in Second-feet per Square Mile			Run-off
	Maximum	Minimum	Mean	Maximum	Minimum	Mean	Depth in Inches on Drainage Area
October (1916)	440	75	197	.35	.06	.16	.18
November "	600	55	186	.47	.04	.15	.17
December "	1,385	125	690	1.09	.10	.54	.62
January (1917)	1,530	0	453	1.20	.00	.36	.42
February	455	0	60	.36	.00	.05	.05
March	20,030	545	5,242	15.77	.43	4.13	4.76
April	10,170	700	2,738	8.01	.55	2.16	2.41
May	10,370	145	2,143	8.17	.11	1.69	1.95
June	7,640	515	2,130	6.02	.41	1.68	1.87
July	8,000	185	2,667	6.30	.15	2.10	2.42
August	515	55	290	.41	.04	.23	.27
September	265	22	143	.21	.02	.11	.12
The year	20,030	0	1,424	15.77	.00	1.12	15.22

Thames River (North Branch) near Fanshawe

Location—At the highway bridge near Fanshawe Post Office, between lots 8 and 9, concessions 4 and 5, Township of London, County of Middlesex.

Records Available—Daily gauge heights and discharge measurements from May 13, 1915.

Drainage Area—585 square miles.

Gauge—Vertical staff 0 to 12 feet on right abutment, downstream side. Elevation of zero on gauge 4.00 is referred to a B.M. (elevation 30.00) on tension rod, downstream side, 170 feet from the initial point of soundings.

Channel and Control—The channel is straight above and below section for 500 feet. The bed of the stream is composed of clay and gravel, the banks are high and will not overflow. The channel and control is shifting during high-water periods.

Discharge Measurements—Made from the bridge and at a permanent wading section about 500 feet above during low water.

Accuracy—This curve is fairly well defined.

Observer—Allen Donley, London.

Discharge Measurements of Thames River (North Branch) near Fanshawe in 1917

Date	Hydrographer	Width in Feet	Area of Section in Sq. Feet	Mean Velocity in Feet per Sec.	Gauge Height in Feet	Discharge in Sec-Feet	Discharge in Second-feet per Square Mile
1917							
Feb. 9....	Yeates, W.....	30	40	2.11	6.92	84 (a)	.....
Mar. 7....	Roberts, E.....	88	229	.86	7.50	197 (b)	.....
" 14....	"	171	979	2.38	9.58	2,331 (c)	.....
" 25....	Yeates, W	171	1,235	4.19	11.08	5,178 (d)	.....
" 26....	"	171	1,201	3.80	10.87	4,565 (d)	.....
" 27....	"	171	1,133	3.51	10.46	3,980 (d)	.....
" 28....	"	171	1,064	3.13	10.08	3,330 (d)	.....
May 16....	"	90	118	1.69	6.89	200 (e)	.....
June 19....	Roberts, E.....	95	124	1.80	6.99	223	.....
July 4....	Yeates. W.....	117	774	1.41	8.38	1,091	.....
Aug. 16....	Roberts, E.....	35	33	.....	6.46	82	.....
Sept. 30....	Yeates, W.....	31	24	.....	6.25	44	.....
Oct. 24....	"	88	120	.....	6.89	186	.....

(a) Ice measurement. Not taken at regular section.
(b) Ice measurement taken 350 feet above regular section.
(c) Ice at sides may have effect.
(d) Some surface velocities observed and co-efficient applied.
(e) Not taken at regular section.

Daily Gauge Height and Discharge of Thames River (North Branch) near Fanshawe for 1916-7

Drainage Area, 585 Square Miles

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge
	Feet	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*
1	6.54	58	6.23	35	6.92	171	7.46	299	6.92	99	6.98	91	8.67	1370	7.14	251	7.71	525	8.83	1560	6.56	87	6.27	40
2	6.48	51	6.27	41	6.98	189	7.31	239	7.08	135	7.58	267	9.96	3030	7.73	540	7.64	484	10.04	3150	6.50	75	6.54	83
3	6.52	56	6.23	35	7.04	211	7.21	199	7.08	135	7.75	337	10.14	3300	7.48	400	7.52	420	9.33	2160	6.44	66	6.35	53
4	6.39	41	6.29	44	7.06	219	7.04	150	7.00	115	7.69	311	9.94	3000	7.29	311	7.67	500	9.10	1880	6.37	56	6.17	26
5	6.29	31	6.23	35	6.96	183	7.48	307	7.00	115	7.67	303	9.62	2550	7.19	271	7.62	470	8.79	1510	6.27	41	6.35	53
6	6.27	30	6.27	41	6.71	118	8.56	1040	7·00	115	7.56	259	9.14	1930	7.14	251	7.50	410	8.73	1440	6.29	44	6.31	47
7	6.19	23	6.19	29	6.64	103	8.54	1030	7.04	125	7.56	219	8.87	1600	7.06	219	7.79	585	8.42	1100	6.23	35	6.37	56
8	6.19	23	6.10	18	6.79	138	8.46	955	7.00	115	7.52	203	9.00	1760	7.12	243	7.75	555	8.21	910	6.21	32	6.42	63
9	6.14	20	6.12	20	6.62	79	8.25	780	6.87	70	7.54	211	8.67	1370	7.29	311	7.54	430	7.83	610	6.23	35	6.42	63
10	6.08	17	6.25	38	7.29	271	8.46	955	6.85	68	7.56	219	8.29	980	7.39	356	7.44	380	9.92	2970	6.33	50	6.35	53
11	6.10	18	6.60	95	7.31	279	8.73	1210	6.83	64	7.79	311	8.27	965	7.39	356	7.39	356	8.87	1600	6.50	75	6.31	47
12	6.04	14	6.60	95	7.27	263	7.69	405	6.85	68	9.87	2200	8.08	805	7.50	410	7.33	329	8.37	1050	6.46	69	6.27	40
13	6.06	16	6.42	63	7.25	255	7.56	342	6.77	55	10.92	3770	8.04	770	7.27	303	7.31	320	8.12	835	6.31	47	6.21	32
14	6.14	20	6.39	59	7.14	211	7.60	360	6.79	59	9.58	1860	7.73	540	7.04	211	7.27	303	7.75	555	6.23	35	6.19	29
15	6.19	23	6.29	44	7.00	165	7.48	307	6.81	62	9.44	1690	7.73	540	6.85	153	7.19	271	8.04	770	6.31	47	6.14	23
16	6.14	20	6.29	44	6.71	97	7.37	263	6.69	44	9.12	1310	7.56	440	6.87	158	7.14	251	7.96	710	6.25	38	6.19	29
17	6.08	17	6.35	53	6.37	40	7.31	239	6.71	47	9.00	1180	7.46	390	6.83	148	7.04	211	8.21	910	6.23	35	6.10	18
18	6.14	20	6.29	44	6.25	24	7.21	199	6.77	55	10.25	2720	7.31	320	6.77	133	6.98	189	9.71	2660	6.37	56	6.12	20
19	6.23	26	6.29	44	6.23	22	7.04	125	6.69	44	8.96	1140	7.23	287	6.85	153	7.02	203	9.42	2270	6.31	47	6.23	35
20	6.31	33	6.39	59	6.79	113	7.02	120	6.79	59	8.96	1140	7.31	320	6.87	158	6.87	158	8.92	1660	6.25	38	6.25	38
21	6.46	49	6.67	109	6.81	117	6.87	89	6.73	49	9.29	1630	7.48	400	6.83	148	6.85	153	8.29	980	6.17	26	6.19	29
22	6.46	49	6.37	56	6.75	105	6.89	93	6.75	53	10.25	3020	7.44	380	6.81	143	6.79	138	7.96	710	6.27	41	6.12	20
23	6.42	44	6.31	47	6.67	89	6.87	89	6.77	55	11.04	4600	7.39	356	6.73	123	6.87	158	7.54	430	6.23	35	6.06	15
24	6.39	41	6.35	53	6.54	66	6.85	85	6.75	53	12.83	11840	7.27	303	6.83	148	7.46	390	7.46	390	6.29	44	6.10	18
25	6.37	39	6.31	47	6.75	105	6.87	89	6.81	62	11.67	7380	7.23	287	8.37	1050	7.25	295	7.37	347	6.23	35	6.06	15
26	6.42	44	6.35	53	6.75	105	6.71	62	6.85	68	11.12	5350	7.21	279	8.60	1290	7.58	450	7.29	311	6.19	29	6.10	18
27	6.42	44	6.54	83	6.92	145	6.71	62	6.81	62	10.39	3710	7.19	271	8.64	1330	8.29	980	7.12	243	6.29	44	6.12	20
28	6.39	41	6.42	63	6.85	127	6.62	48	6.87	70	10.04	3150	7.23	287	8.56	1250	8.75	1460	6.89	163	6.27	41	6.19	29
29	6.37	39	6.56	87	6.87	133	6.75	68	.....	.....	9.27	2080	7.19	271	8.52	1200	8.87	1600	6.83	148	6.19	29	6.10	18
30	6.23	26	7.21	279	6.42	33	6.83	81	.....	.....	9.08	1860	7.17	263	8.33	1020	8.50	1180	6.54	83	6.33	50	6.23	35
31	6.19	23	.....	.....	6.46	39	6.83	81	.....	.....	8.54	1220	.....	.....	7.96	710	.....	.....	6.58	91	6.33	50	.....	.....

Monthly Discharge of Thames River (North Branch) near Fanshawe for 1916-7

Drainage Area, 585 Square Miles

Month	Discharge in Second-feet			Discharge in Second-feet per Square Mile			Run-off
	Maximum	Minimum	Mean	Maximum	Minimum	Mean	Depth in Inches on Drainage Area
October (1916).	58	14	32	.10	.02	.05	.06
November "	279	18	60	.48	.03	.10	.11
December "	279	24	136	.48	.04	.23	.27
January (1917).	1,210	48	335	2.07	.08	.57	.66
February	135	44	76	.23	.08	.13	.14
March	11,840	91	2,116	20.24	.16	3.62	4.17
April	3,300	263	978	5.64	.45	1.67	1.86
May	1.330	123	444	2.27	.21	.76	.88
June	1,600	138	472	2.74	.24	.81	.90
July	3,150	83	1,102	5.38	.14	1.88	2.17
August	87	26	46	.15	.04	.08	.09
September	83	15	36	.14	.03	.06	.07
The year	11,840	14	491	20.24	.02	.84	11.39

Thames River (South Branch) near Ealing

Location—At the highway bridge known as Vauxhall Bridge between lots 10 and 11, concession B, between Townships of London and Westminster, County of Middlesex.

Records Available—Daily gauge heights and discharge measurements from May 11, 1915.

Drainage Area—515 square miles.

Gauge—Vertical staff 0 to 12 feet on downstream side of first right pier. Elevation of zero on gauge is 4.00, referred to B.M., elevation 30.00.

Channel and Control—The channel is straight above and below for 800 feet. The banks and control are shifting under high-water conditions.

Discharge Measurements—Made from the bridge. During the extreme low water a wading section is used.

Winter Flow—The relation of gauge height to discharge is affected by ice during the winter months.

Accuracy—The rating curve is fairly well defined up to gauge height 11.00 feet.

Observer—F. W. Leathorn, London.

Discharge Measurements of Thames River (South Branch) near Ealing in 1917

Date	Hydrographer	Width in Feet	Area of Section in Sq. Feet	Mean Velocity in Feet per Sec.	Gauge Height in Feet	Discharge in Sec-Feet	Discharge in Second-feet per Square Mile
1917							
Jan. 9	Yeates, W.	101	248	1.67	7.58	414(a)	.....
Feb. 11	"	95	173	.50	7.04	86(b)	.....
Mar. 9	Roberts, E.	110	264	1.89	8.33	500(b)	.....
" 13	"	193	1,267	2.29	12.33	2,908(c)	.....
" 25	Yeates, W.	193	1,138	3.22	11.60	3,669(d)	.....
" 26	"	193	848	2.62	10.09	2,222(d)	.....
" 27	"	193	752	2.46	9.58	1,851(d)	.....
" 28	"	189	733	2.34	9.50	1,717(d)	.....
May 16	"	149	222	1.06	6.56	236	.....
June 19	Roberts, E.	161	347	1.63	7.39	565	.....
July 4	Yeates, W.	181	499	2.02	8.22	1,009	.....
Aug. 16	Roberts, E.	147	189	.88	6.31	167	.....
Sept. 30	Yeates, W.	144	183	.78	6.25	142	.....
Oct. 24	"	153	237	1.23	6.69	294	.....

(a) Ice measurement.
(b) Ice measurement taken 400 feet above gauge.
(c) Affected by ice jam. Surface velocities recorded and co-efficient applied.
(d) Mostly all surface velocities recorded and co-efficient applied.

Daily Gauge Height and Discharge of Thames River (South Branch) near Ealing for 1916-7

Drainage Area, 515 Square Miles

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge
	Feet	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*
1	6.12	105	6.10	95	6.58	239	6.83	179	7.04	137	8.19	456	9.33	1610	7.29	496	7.94	790	8.44	1060	6.39	182	6.12	101
2	6.00	80	6.04	80	6.54	227	6.79	167	7.00	125	8.17	448	10.96	3010	8.21	935	8.00	820	9.00	1390	6.37	176	6.21	128
3	6.00	80	6.10	95	6.25	140	6.83	179	7.00	125	8.00	380	11.37	3460	8.00	820	7.64	645	8.69	1200	6.37	176	6.23	134
4	5.96	72	6.04	80	6.25	140	6.83	179	7.04	107	8.00	380	10.42	2500	7.58	615	7.35	520	8.14	895	6.29	152	6.25	140
5	5.96	72	6.04	80	6.23	134	7.10	260	7.04	107	7.92	352	9.02	1400	7.33	510	7.25	480	7.50	580	6.17	116	6.17	116
6	5.96	72	5.87	38	6.48	209	7.75	500	7.04	107	8.00	380	10.54	2610	7.33	510	8.37	1020	7.08	412	6.25	140	6.25	140
7	5.96	72	6.04	80	6.27	146	8.00	605	7.00	95	8.00	380	10.92	2970	7.25	480	11.46	3560	7.00	380	6.29	152	6.39	182
8	6.00	80	6.14	107	6.23	134	7.87	550	7.00	95	8.04	396	10.39	2470	7.08	412	10.52	2590	7.83	735	6.33	164	6.42	191
9	5.83	50	6.10	95	6.27	116	7.62	428	7.00	95	8.31	505	8.79	1260	7.12	428	9.14	1480	8.77	1250	6.29	152	6.29	152
10	6.04	88	6.23	134	6.29	122	7.67	448	7.00	95	8.33	472	8.12	885	7.27	488	8.33	1000	11.33	3410	6.83	321	6.25	140
11	5.92	64	6.19	122	6.23	104	7.54	396	7.04	80	9.14	790	7.79	715	7.04	396	7.85	745	12.27	4560	6.50	215	6.25	140
12	5.92	64	6.21	128	6.37	146	7.37	334	6.87	38	10.79	1650	7.60	625	6.81	314	7.54	600	10.08	2190	6.37	176	6.17	116
13	6.00	80	6.04	80	6.83	286	7.29	307	7.00	70	12.04	2610	7.46	565	6.71	279	7.25	480	9.08	1440	6.29	152	6.17	116
14	6.25	137	6.10	95	6.54	197	7.12	251	7.08	90	12.08	2640	7.21	464	6.62	251	8.27	970	8.46	1070	6.23	134	6.19	122
15	6.25	137	6.19	122	6.58	179	7.08	209	7.00	70	11.33	1990	7.21	464	6.52	221	8.37	1020	8.39	1030	6.48	209	6.14	107
16	6.19	122	6.17	116	6.58	179	7.00	185	6.96	60	10.62	1470	7.14	436	6.50	215	7.96	800	8.21	935	6.33	164	6.17	116
17	6.23	132	6.12	101	6.50	155	6.92	161	7.04	80	10.75	1560	7.06	404	6.50	215	7.62	635	8.79	1260	6.33	164	6.08	90
18	6.08	96	6.14	107	6.50	155	6.96	173	7.04	80	11.17	1860	7.04	396	6.50	215	7.37	530	10.87	2920	6.23	134	6.06	85
19	6.23	132	6.04	80	6.50	155	7.00	185	7.04	80	10.56	1430	7.08	412	6.50	215	7.29	496	11.17	3240	6.17	116	6.14	107
20	6.50	210	6.00	70	6.50	155	7.08	209	7.08	90	9.98	1080	7.08	412	7.54	600	7.08	412	9.50	1730	6.17	116	6.08	90
21	6.69	267	6.12	101	6.50	125	7.12	221	7.12	101	10.48	1720	7.50	580	7.58	615	7.14	436	8.71	1210	6.58	239	6.12	101
22	6.54	222	6.08	90	6.50	125	7.08	179	7.17	116	10.37	2020	7.62	635	7.58	615	6.96	366	8.17	915	6.29	152	6.12	101
23	6.35	167	6.08	90	6.50	125	7.08	179	7.17	116	10.67	2540	7.52	590	9.83	1990	6.79	307	7.67	655	6.31	158	5.96	60
24	6.39	177	6.27	146	6.50	125	7.00	155	7.17	116	12.42	4770	7.52	590	9.89	2040	6.94	359	7.33	510	6.46	203	6.00	70
25	6.31	157	6.17	116	6.50	125	7.00	155	7.25	140	11.67	3800	7.29	495	10.37	2450	7.00	380	7.04	396	6.50	215	6.06	85
26	6.21	127	6.33	164	6.50	125	7.00	155	7.37	176	10.58	2640	7.42	550	9.25	1550	8.04	840	6.96	366	6.33	164	6.08	90
27	6.12	105	6.29	152	6.54	107	7.00	155	7.71	279	9.58	1806	7.44	555	8.54	1120	10.58	2640	6.92	352	6.17	116	6.08	90
28	6.10	100	6.25	140	6.77	176	7.12	191	8.00	380	9.46	1700	7.25	480	8.02	830	9.75	1920	6.79	307	6.25	140	6.12	101
29	6.12	105	6.42	191	6.83	194	7.08	149	....	.....	9.21	1530	7.06	404	7.96	800	9.17	1500	6.58	239	6.23	134	6.19	122
30	6.00	80	6.54	227	6.83	194	7.08	149	....	.....	8.71	1210	7.12	428	7.77	705	8.85	1295	6.56	233	6.27	146	6.17	116
31	6.10	100	....	.....	6.81	188	7.08	149	....	.....	8.29	980	.....	.....	7.50	580	....	....	6.50	215	6.33	164	.....	....

Monthly Discharge of Thames River (South Branch) near Ealing for 1916-7

Drainage Area, 515 Square Miles

Month	Discharge in Second-feet			Discharge in Second-feet per Square Mile			Run-off
	Maximum	Minimum	Mean	Maximum	Minimum	Mean	Depth in Inches on Drainage Area
October (1916)	267	64	115	.52	.12	.22	.25
November "	227	38	111	.44	.07	.22	.25
December "	239	104	159	.46	.20	.31	.36
January (1917)	605	155	250	1.17	.30	.49	.56
February	380	38	116	.74	.07	.23	.24
March	4,770	352	1,482	9.26	.68	2.88	3.32
April	3,460	396	1,080	6.72	.77	2.10	2.34
May	2,450	215	707	4.76	.42	1.37	1.58
June	3,560	307	988	6.91	.60	1.92	2.14
July	4,560	215	1,196	8.85	.42	2.32	2.67
August	321	116	166	.62	.23	.32	.37
September	191	60	115	.37	.12	.22	.25
The year	4,770	38	543	9.26	.07	1.05	14.31

Regular Stations

SOUTH-WESTERN ONTARIO DISTRICT

Grand River and Tributaries

River	Location	Drainage Area Sq. Miles	Township	County
Grand	at Belwood	280	Garafraxa	Wellington
"	at Brantford	2,000	Brantford	Brant
"	near Conestogo	550	Woolwich	Waterloo
"	at Galt	1,360	North Dumfries	"
"	at Glen Morris	1,390	South Dumfries	Brant
"	at York	2,280	Oneida	Haldimand
Nith	near Canning	430	Blenheim	Oxford
Speed	near Guelph	77	Guelph	Wellington
"	at Hespeler,	250	Waterloo	Waterloo

Grand River at Belwood

Location—At the bridge in the Village of Belwood, on the 7th concession, Township of Garafraxa, County of Wellington.

Records Available—From August 31, 1913.

Drainage Area—280 square miles.

Gauge—Vertical steel staff 0 to 12 feet on right abutment. Elevation of zero on gauge is 1366.00, which has remained unchanged since established.

Channel and Control—The channel is straight for about 400 feet above and 600 feet below gauging section. The channel bed at the bridge is solid rock, and permanent at all stages. At the permanent low water section, however, the channel is shifting under high water conditions.

Winter Flow—During the winter months the relation of gauge height to discharge is greatly affected by ice, and readings are taken to determine the winter discharge.

Accuracy—The river stage at this section is not affected by any power plants above or below. The rating curve is well defined, and estimates are considered good.

Observer—H. Hutchinson, Belwood P.O.

Discharge Measurements of Grand River at Belwood in 1916-7

Date	Hydrographer	Width in Feet	Area of Section in Sq. Feet	Mean Velocity in Feet per Sec.	Gauge Height in Feet	Discharge in Sec-Feet	Discharge in Second-feet per Square Mile
1916							
Oct. 6....	Roberts, E.	63	14	.38	1366.83	5	.....
Dec. 20....	Yeates, W.....	72	28	1.12	1367.62	31 (a)	.....
1917							
Jan. 11....	"	76	26	1.25	1367.69	33 (a)	.....
Feb. 6....	"	70	18	.53	1367.56	9 (a)	.....
Mar. 20....	Roberts, E.....	120	79	1.82	1369.08	145 (a)	.....
Apr. 4....	Yeates, W.....	110	671	3.03	1369.92	2,034	.....
" 4....	"	110	665	3.02	1369.86	2,008	.....
May 12....	Roberts, E.....	77	48	1.74	1367.31	84	.....
Sept. 26....	Yeates, W.....	61	11	.45	1366.81	5	.....
Oct. 19....	"	65	42	1.17	1367.29	75	.....

(a) Ice measurement.

Daily Gauge Height and Discharge of Grand River at Belwood for 1916-7

Drainage Area. 280 Square Miles

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge
	Feet	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*
1	1366.85	6	1366.98	18	1367.25	68	1367.46	6	1367.75	28	1368.25	34	1370.79	3380	1367.62	187	1367.37	101	1369.35	1330	1367.00	20	1366.89	9
2	1366.83	5	1366.94	14	1367.21	58	1367.50	10	1367.67	17	1368.25	30	1371.08	3970	1367.79	247	1367.31	83	1369.44	1420	1367.04	26	1366.92	12
3	1366.83	5	1366.92	12	1367.17	49	1367.50	10	1367.67	17	1368.08	8	1370.42	2820	1367.77	240	1367.27	73	1368.75	795	1367.01	22	1366.89	9
4	1366.83	5	1366.94	14	1367.17	49	1367.50	10	1367.67	17	1368.08	6	1369.85	1910	1367.67	205	1367.25	68	1368.27	460	1366.99	19	1366.89	9
5	1366.83	5	1366.98	18	1367.21	58	1367.67	31	1367.58	8	1368.08	4	1369.48	1460	1367.69	212	1367.21	58	1367.87	275	1366.95	15	1366.87	7
6	1366.83	5	1366.92	12	1367.52	152	1367.67	31	1367.54	4	1368.08	2	1368.92	930	1367.85	268	1367.21	58	1367.62	187	1366.93	13	1366.85	5
7	1366.83	5	1366.96	16	1367.39	107	1367.67	31	1367.67	15	1368.12	4	1368.54	635	1367.71	219	1367.27	73	1367.45	128	1366.92	12	1366.83	3
8	1366.83	5	1366.92	12	1367.29	78	1367.67	31	1367.67	13	1368.17	7	1368.50	605	1367.60	180	1367·33	89	1367.56	166	1367.33	89	1366.83	3
9	1366.89	7	1366.96	16	1367.39	107	1367.67	31	1367.67	11	1368.25	13	1368.42	550	1367.50	145	1367.38	104	1367.73	226	1367.17	49	1366.83	3
10	1366.92	8	1366.98	18	1368.67	730	1367.58	18	1367.75	17	1368.25	11	1368.42	550	1367.46	131	1367.32	86	1369.69	1700	1367.06	29	1366.83	3
11	1366.87	6	1367.00	20	1368.37	458	1367.58	18	1367.75	15	1368.33	17	1368.17	405	1367.35	95	1367.23	63	1369.71	1730	1367.00	20	1366.83	3
12	1366.92	8	1367.00	20	1368.29	415	1367.58	18	1367.75	13	1368.62	65	1369.25	1225	1367.29	78	1367.14	43	1369.23	1210	1366.97	17	1366.83	3
13	1366.96	9	1367.00	20	1367.83	190	1367.58	18	1367.75	11	1368.67	73	1368.92	930	1367.23	63	1367.08	32	1368.81	845	1366.92	12	1366.83	3
14	1367.00	11	1367.00	20	1367.92	222	1367.58	18	1367.75	9	1368.67	67	1368.92	930	1367.19	53	1367.48	138	1369.85	1910	1366.92	12	1366.83	3
15	1366.96	9	1367.00	20	1367.79	142	1367.62	23	1367.75	7	1368.67	63	1368.12	380	1367.14	43	1367.44	124	1369.52	1510	1366.92	12	1366.83	3
16	1366.96	9	1366.92	12	1367.58	75	1367.67	31	1367.75	5	1368.75	47	1367.87	275	1367.12	39	1367.35	95	1368.92	930	1366.92	12	1366.83	3
17	1366.94	9	1366.92	12	1367.46	29	1367.67	31	1367.75	3	1369.00	145	1367.79	245	1367.08	32	1367.27	73	1368.40	535	1366.89	9	1366.83	3
18	1366.92	8	1366.92	12	1367.37	17	1367.50	10	1367.92	18	1369.33	250	1367.92	295	1367.06	29	1367.22	60	1368.12	380	1366.89	9	1366.83	3
19	1367.02	12	1366.92	12	1367.25	5	1367.58	18	1367.92	16	1369.08	152	1368.12	380	1367.04	29	1367.29	78	1368.08	361	1366.88	8	1366.83	3
20	1367.12	18	1366.92	12	1367.58	32	1367.58	18	1367.92	14	1369.00	110	1368.54	635	1367.19	53	1367.34	92	1367.98	317	1366.87	7	1366.83	3
21	1366.12	18	1366.92	12	1367.25	0	1367.58	18	1367.92	12	1368.87	169	1369.25	1225	1367.23	63	1367.27	73	1367.74	229	1366.87	7	1366.83	3
22	1366.12	18	1366.92	12	1367.21	0	1367.58	18	1367.92	10	1369.27	458	1368.79	825	1367.37	101	1367.17	49	1367.56	166	1366.85	5	1366.83	3
23	1366.08	14	1366.94	14	1367.25	0	1367.54	14	1367.92	8	1370.33	1630	1368.33	493	1368.69	745	1367.08	32	1367.44	124	1366.92	12	1366.81	1
24	1366.96	9	1367.00	20	1367.37	7	1367.50	10	1368.00	14	1371.62	4280	1368.04	343	1368.58	660	1367.62	187	1367.32	86	1366.98	18	1366.81	1
25	1366.94	9	1367.00	20	1367.27	0	1367.50	10	1367.92	4	1372.70	7680	1367.92	293	1368.64	705	1367.69	212	1367.24	65	1367.00	20	1366.81	1
26	1366.92	8	1367.00	20	1367.35	0	1367.58	18	1368.21	37	1372.67	8230	1367.67	205	1368.19	415	1367.94	301	1367.18	51	1366.98	18	1366.81	1
27	1366.92	8	1367.00	20	1367.42	12	1367.50	10	1368.25	41	1372.83	8760	1368.04	343	1367.81	254	1367.96	309	1367.13	41	1367.00	20	1366.81	1
28	1366.92	8	1367.00	20	1367.37	7	1367.50	10	1368.25	37	1370.67	3150	1367.75	233	1367.62	187	1367.64	194	1367.07	31	1366.96	16	1366.83	3
29	1366.92	8	1367.08	32	1367.42	12	1367.58	18	.....	....	1369.75	1780	1367.67	205	1367.48	138	1367.81	254	1367.03	25	1366.92	12	1366.83	3
30	1366.92	8	1367.25	68	1367.42	12	1367.79	34	.....	....	1369.33	1300	1367.58	173	1367.35	95	1367.85	268	1367.00	20	1366.92	12	1366.83	3
31	1366.94	9	.....	....	1367.37	7	1367.75	28	.....	....	1370.17	2330	.....	....	1367 27	73	.....	....	1367.00	20	1366.92	12	.....	...

Monthly Discharge of Grand River at Belwood for 1916-7

Drainage Area, 280 Square Miles

Month	Discharge in Second-feet			Discharge in Second-feet per Square Mile			Run-off
	Maximum	Minimum	Mean	Maximum	Minimum	Mean	Depth in Inches on Drainage Area
October (1916)	18	5	9	.06	.02	.03	.03
November "	68	12	18	.24	.04	.06	.07
December "	730	0	100	2.61	.00	.36	.42
January (1917)	34	6	19	.12	.02	.07	.08
February	41	3	15	.15	.01	.05	.05
March	8,760	2	1,319	31.29	.007	4.71	5.43
April	3,979	173	895	14.18	.62	3.20	3.57
May	745	26	193	2.66	.09	.69	.80
June	309	32	116	1.10	.11	.41	.46
July	1,910	20	557	6.82	.07	1.99	2.29
August	89	5	18	.32	.02	.06	.07
September	12	1	4	.04	.004	.01	.01
The year	8,760	0	274	31.29	.00	.98	13.28

Grand River at Brantford

Location—At the Toronto-Hamilton-Buffalo Railway bridge in the City of Brantford, County of Brant.

Records Available—Discharge measurements from August, 1912. Daily gauge heights from July 8, 1913.

Drainage Area—2,000 square miles.

Gauge—Vertical steel staff, 0 to 12 feet on left abutment. Elevation of zero on gauge is 643.00, which has remained unchanged since established.

Channel and Control—The flow is confined between the abutments of the bridge at all stages. The bed and left bank is shifting under high water conditions.

Discharge Measurements—Made from the bridge at all stages.

Winter Flow—The relation of gauge height to discharge is seriously affected by ice, and measurements are made to determine the winter flow.

Regulation—The Western Counties Electric Company have a dam 1,000 feet above this section that causes fluctuations that are noticeable in the river stage. Their plant is running at its full capacity. The observed mean gauge height does not give the correct mean daily stage.

Diversions—The Western Counties Electric Company use about 50 second feet for power purposes at times.

Accuracy—With the exception of a slight angle at section these records can be classified as good.

Observer—John Anguish, Brantford.

Discharge Measurements of Grand River at Brantford in 1916-7

Date	Hydrographer	Width in Feet	Area of Section in Sq. Feet	Mean Velocity in Feet per Sec.	Gauge Height in Feet	Discharge in Sec-Feet	Discharge in Second-feet per Square Mile
1916							
Dec. 10....	Yeates, W	248	844	.70	644.96	594(a)	.....
1917							
Jan. 2....	"	248	868	.84	645.08	732(a)	.....
Feb. 1....	Roberts, E	275	838	.96	645.31	807(a)	.....
Mar. 2....	"	278	949	1.15	645.73	1,095(b)	.....
" 26....	"	373	4,704	6.76	654.90	31,778(c)	.....
" 27....	"	373	4,704	7.14	654.92	33,590(c)	.....
" 29....	Yeates, W, ...	373	2,801	3.96	649.83	11,090(c)	.....
" 29....	"	373	2,764	3.94	649.67	10,885(c)	.....
" 30....	"	373	2,354	3.30	648.58	7,779(c)	.....
April 2....	Roberts, E, ...	373	3,473	4.86	651.58	16,885(c)	.....
" 3....	"	373	3,697	5.01	652.17	18,526(c)	.....
" 4....	"	373	2,727	3.89	649.62	10,596(c)	.....
" 4....	"	373	2,624	3.75	649.34	9,844(c)	.....
" 23....	"	366	1,608	1.90	646.62	3,051	.....
May 19....	Yeates, W, ...	323	1,001	.86	644.94	857	.....
July 11....	"	373	3,323	4.42	651.21	14,682	.....
" 16....	"	373	2,055	2.75	647.81	5,656	.....
Aug. 13....	Roberts, E.	321	948	.75	644.76	709	.....
Sept. 24....	Yeates, W.	218	744	.27	643.96	199	.....
" 27....	"	215	709	.27	643.89	194	.....
Oct. 6....	"	282	884	.58	644.52	514	.....

(a) Ice measurement.
(b) Ice measurements. Some estimated velocities.
(c) Surface velocities recorded and co-efficient applied.

Daily Gauge Height and Discharge of Grand River at Brantford for 1916-7

Drainage Area, 2,000 Square Miles

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge
	Feet	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*
1	644.52	465	644.67	573	645.06	940	644.96	610	645.04	545	645.58	960	649.21	9498	645.46	1356	645.52	1424	647.08	4108	644.60	510	644.44	388
2	644.56	495	644.68	582	645.04	920	645.12	755	645.17	666	645.60	980	650.87	14260	645.64	1572	645.64	1572	653.17	22625	644.58	494	644.42	374
3	644.37	359	644.69	591	644.98	860	644.98	625	645.06	565	645.52	900	651.71	16893	645.87	1895	645.50	1400	649.87	11346	644.85	735	644.44	388
4	644.39	373	644.70	600	644.92	800	645.00	645	644.92	446	645.56	940	649.54	10422	646.04	2154	645.42	1312	647.48	4966	644.81	699	644.48	416
5	644.44	408	644.71	609	644.94	820	645.14	770	645.31	790	645.56	940	648.42	7322	645.71	1664	645.27	1150	646.56	3044	644.64	546	644.44	388
6	644.44	408	644.72	618	644.94	820	645.21	840	645.19	680	645.50	880	648.54	7638	645.67	1611	645.27	1150	646.02	2122	644.56	478	644.42	374
7	644.37	359	644.73	627	644.94	820	645.31	940	645.25	735	645.50	880	648.62	7854	645.96	2030	646.31	2597	645.56	1472	644.67	573	644.39	354
8	644.29	304	644.74	636	645.12	1000	645.42	1050	645.12	620	645.62	1000	647.79	5705	645.83	1835	645.89	1925	645.79	1776	644.54	462	644.50	430
9	644.25	278	644.75	645	644.96	840	645.50	1130	645.19	680	645.58	960	647.21	4381	645.64	1572	645.44	1334	647.06	4066	644.56	478	644.44	388
10	644.31	317	644.75	645	644.96	655	645.48	1110	644.98	494	645.50	880	646.67	3260	645.48	1378	645.46	1356	650.23	12357	645.23	1110	644.42	374
11	644.33	331	644.58	494	645.02	710	645.44	1070	644.87	409	645.71	1090	646.23	2461	645.39	1279	645.39	1279	650.98	14590	645.00	880	644.25	270
12	644.33	331	644.62	528	645.10	780	645.44	1070	645.17	665	646.56	2190	646.06	2186	645.27	1150	645.14	1020	649.50	10310	644.83	717	644.25	270
13	644.42	394	644.75	645	645.02	710	645.35	930	645.12	620	646.62	2280	646.58	3082	645.19	1070	645.04	920	648.69	8043	644.64	546	644.21	246
14	644.44	408	644.67	575	644.73	454	645.17	755	645.12	620	647.54	4020	646.31	2597	645.04	920	645.23	1110	648.73	8154	644.62	528	644.21	246
15	644.44	408	644.62	530	644.79	500	645.31	890	645.10	600	647.52	3980	645.98	2060	644.92	800	645.75	1720	649.29	9722	644.54	462	644.17	225
16	644.50	450	644.52	445	644.89	590	645.29	870	645.04	545	647.12	3160	645.79	1776	644.85	735	645.85	1865	647.87	5905	644.60	510	644.33	318
17	644.39	373	644.69	590	644.73	454	645.37	950	645.02	530	647.04	3010	645.54	1448	644.83	717	645.58	1496	646.89	3709	644.29	294	644.21	246
18	644.44	408	644.42	374	645.04	725	645.21	790	645.04	545	647.75	4460	645.44	1334	644.73	627	645.29	1170	646.79	3500	644.33	318	644.14	210
19	644.56	495	644.62	530	644.98	670	645.33	910	645.19	680	648.14	5340	645.44	1334	644.73	627	645.06	940	646.54	3006	644.37	342	644.21	246
20	644.79	670	644.62	530	644.94	635	645.27	850	645.27	755	647.48	3900	645.73	1692	645.04	920	645.98	2060	646.21	2427	644.29	294	644.27	282
21	645.02	885	644.58	494	644.87	575	645.08	670	645.25	735	647.29	3500	646.21	2427	645.44	1334	645.56	1472	645.89	1925	644.17	225	644.25	270
22	645.04	905	644.54	462	644.81	520	645.29	820	645.19	680	647.29	3500	646.79	3500	645.39	1279	645.23	1110	645.69	1637	644.21	246	644.14	210
23	644.96	825	644.56	478	644.69	388	645.25	780	645.12	620	647.83	5080	646.58	3082	645.50	1400	645.00	880	645.60	1520	644.23	258	644.14	210
24	644.85	720	644.64	545	644.60	330	645.21	745	644.98	494	652.50	19770	646.33	2631	647.83	5805	645.12	1000	645.29	1170	644.48	416	644.12	200
25	644.75	640	644.67	575	644.79	462	645.17	710	645.00	510	653.54	24370	646.06	2186	648.02	6282	645.25	1130	645.14	1020	644.44	388	644.08	182
26	644.75	640	644.46	402	644.87	530	645.02	575	645.42	900	654.46	29562	645.83	1835	647.54	5102	645.71	1664	645.25	1130	644.58	494	644.17	225
27	644.67	560	644.69	590	645.00	645	645.02	575	645.50	980	654.33	28770	645.87	1895	646.54	3006	647.37	4724	645.00	880	644.48	416	644.17	225
28	644.72	615	644.83	715	645.00	645	644.98	535	645.46	940	652.83	21129	645.89	1925	646.12	2282	647.56	5148	644.87	753	644.52	446	644.23	258
29	644.56	495	644.81	700	644.92	575	645.00	555	.....	.....	649.71	10898	645.64	1572	645.77	1748	646.56	3044	644.83	717	644.50	430	644.19	235
30	644.62	540	644.98	860	645.00	645	645.04	590	.....	.....	648.54	7658	645.54	1448	645.62	1546	647.35	4680	644.77	663	644.54	462	644.21	246
31	644.67	580	.....	.....	644.87	530	645.10	645	.....	.....	647.94	6080	.....	.....	645.35	1235	.....	.....	644.58	494	644.37	342	.....	.....

Monthly Discharge of Grand River at Brantford for 1916-7

Drainage Area, 2,000 Square Miles

Month	Discharge in Second-feet			Discharge in Second-feet per Square Mile			Run-off
	Maximum	Minimum	Mean	Maximum	Minimum	Mean	Depth in Inches on Drainage Area
October ..(1916).	905	278	498	.46	.14	.25	.29
November "	860	374	573	.43	.19	.29	.32
December "	1,000	330	663	.50	.16	.33	.38
January (1917).	1,130	535	799	.56	.27	.40	.46
February	980	409	645	.49	.20	.32	.33
March	29,562	880	6,550	14.78	.44	3.27	3.77
April.....	16,893	1,334	4,324	8.45	.67	2.16	2.41
May.....	6,282	627	1,835	3.64	.31	.92	1.06
June	5,148	880	1,788	2.57	.44	.89	.99
July	22,625	494	4,820	11.31	.25	2.41	2.78
August	1,110	225	487	.56	.11	.24	.28
September	430	182	290	.22	.09	.15	.17
The year.....	29,562	182	1,951	14.78	.09	.97	13.25

Grand River near Conestogo

Location—At the highway bridge ¼ mile below the Village of Conestogo, Township of Woolwich, County of Waterloo.

Records Available—From July 16, 1913.

Drainage Area—550 square miles.

Gauge—Vertical steel staff 0 to 12 feet on the centre pier of bridge. Elevation of zero is 1017.00 feet.

Channel and Control—The channel is straight for about 300 feet above and below the gauging section. The banks are low and liable to overflow. The bed is composed of gravel, and all the water is confined between the abutments of the bridge, except at a very serious flood. In flood stages the banks and bed are liable to shift slightly.

Discharge Measurements—Made from the bridge during high water, and at a permanent low water section located 600 feet upstream during the low water period.

Winter Flow—The relation of gauge height to discharge is seriously affected by ice during the winter season, and measurements are made to determine the winter flow.

Accuracy—The slight shifting of the channel has little affect. The rating curve is well defined, and records are good.

Observer—Geo. Schinbein, Conestogo.

Discharge Measurements of Grand River near Conestogo in 1916-7

Date	Hydrographer	Width in Feet	Area of Section in Sq. Feet	Mean Velocity in Feet per Sec.	Gauge Height in Feet	Discharge in Sec-Feet	Discharge in Second-feet per Square Mile
1916							
Oct. 6....	Roberts, E.	118	45	.60	1017.77	27	.....
Dec. 20....	Yeates, W.....	136	92	.90	1018.50	83 (a)	.....
1917							
Jan. 11....	"	133	69	1.15	1018.87	79	.....
Feb. 7....	"	140	60	.73	1018.79	44	.....
Mar. 19....	Roberts, E.....	150	320	1.97	1020.67	629	.....
May 12....	"	137	134	1.51	1018.54	202	.....
" 24....	Yeates, W.....	233	588	2.58	1020.31	1,517	.....
Sept. 29....	"	120	57	.47	1017.73	27	.....
Oct. 26....	"	135	88	1.03	1018.25	91	.....

(a) Ice measurement.

Daily Gauge Height and Discharge of Grand River near Conestogo for 1916-7

Drainage Area, 550 Square Miles

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge
	Feet	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*
1	1017.89	42	1017.94	44	1018.46	148	1018.58	56	1018.89	59	1018.92	37	1022.79	4505	1018.89	306	1018.79	266	1023.04	4894	1018.14	68	1018.12	64
2	1017.85	37	1017.94	44	1018.37	121	1018.60	56	1018.96	72	1019.29	88	1023.37	5422	1019.12	422	1018.73	242	1022.50	4090	1018.64	206	1018.08	58
3	1017.89	42	1017.83	33	1018.37	121	1018.71	70	1019.04	88	1019.44	127	1023.00	4830	1019.04	380	1018.60	190	1020.67	1817	1018.35	109	1018.17	74
4	1017.79	30	1017.96	46	1018.31	103	1018.67	59	1018.69	39	1019.42	106	1021.06	2246	1019.06	390	1018.52	166	1019.89	1021	1018.21	82	1018.21	82
5	1017.81	32	1017.89	39	1018.27	94	1018.77	74	1018.83	53	1019.31	82	1020.89	2059	1019.10	410	1018.46	148	1019.33	561	1018.10	60	1018.08	58
6	1017.79	30	1017.92	42	1018.44	142	1018.89	94	1018.75	45	1019.33	86	1020.67	1817	1019.27	519	1018.50	160	1019.00	360	1018.14	68	1018.00	50
7	1017.81	32	1017.96	46	1018.56	178	1018.85	82	1018.89	49	1019.35	90	1020.42	1542	1019.27	519	1018.54	172	1018.83	282	1018.12	64	1018.02	52
8	1017.71	22	1017.94	44	1018.39	127	1018.89	86	1018.87	47	1019.37	94	1020.12	1240	1019.04	380	1018.56	178	1019.12	422	1018.12	64	1017.96	46
9	1017.81	32	1017.92	42	1018.42	136	1018.89	82	1018.83	43	1019.33	76	1019.87	1063	1018.83	282	1018.60	190	1019.60	760	1019.25	505	1018.02	52
10	1017.67	18	1017.96	46	1018.42	106	1018.81	62	1018.77	37	1019.27	64	1019.46	652	1018.77	258	1018.54	172	1022.92	4702	1018.58	184	1017.94	44
11	1017.71	22	1018.00	50	1018.48	124	1018.77	57	1018.71	31	1019.48	109	1019.50	680	1018.64	206	1018.50	160	1021.73	3039	1018.39	127	1018.02	52
12	1017.71	22	1017.87	37	1018.50	130	1018.87	74	1018.75	35	1019.56	133	1020.25	1370	1018.52	166	1018.37	121	1021.48	2746	1018.17	74	1017.92	42
13	1017.87	39	1017.94	44	1018.44	112	1018.85	70	1018.75	30	1019.75	190	1020.23	1350	1018.39	127	1018.35	115	1020.75	1905	1018.14	68	1017.89	39
14	1017.94	49	1017.87	37	1018.48	124	1018.75	55	1018.75	30	1019.83	202	1019.64	796	1018.35	115	1018.79	266	1021.98	3384	1018.14	68	1018.08	58
15	1017.78	30	1017.89	39	1018.54	112	1018.81	62	1018.75	30	1019.89	226	1019.25	505	1018.33	109	1018.71	234	1021.31	2542	1018.08	58	1017.98	48
16	1017.96	51	1017.81	31	1018.60	130	1018.83	66	1018.75	30	1019.96	254	1019.23	491	1018.25	90	1018.54	172	1020.50	1630	1018.00	50	1017.85	35
17	1017.79	30	1017.94	44	1018.48	96	1018.87	74	1018.75	30	1020.35	440	1019.08	400	1018.19	78	1018.39	127	1019.87	1003	1017.98	48	1017.77	27
18	1017.75	26	1017.96	46	1018.46	92	1018.71	51	1018.92	47	1020.39	464	1019.02	370	1018.23	86	1013.56	178	1019.54	712	1018.04	54	1017.81	31
19	1017.79	30	1018.00	50	1018.48	96	1018.68	48	1018.79	29	1020.50	505	1019.25	505	1018.23	86	1018.54	172	1019.37	589	1017.94	44	1018.00	50
20	1018.29	119	1017.89	39	1018.44	68	1018.69	49	1018.79	29	1020.58	560	1019.75	895	1018.46	148	1018.50	160	1019.25	505	1018.02	52	1017.94	44
21	1018.33	130	1017.81	31	1018.46	72	1018.67	47	1018.79	29	1020.67	625	1020.39	1510	1018.44	142	1018.46	148	1019.06	390	1018.04	54	1017.92	22
22	1018.21	100	1017.75	25	1018.41	59	1018.73	53	1018.79	29	1021.25	1120	1020.21	1330	1018.64	206	1018.35	115	1018.83	282	1017.94	44	1017.75	25
23	1018.14	83	1017.94	44	1018.44	60	1018.79	59	1018.83	33	1022.96	3890	1019.83	967	1020.48	1608	1018.31	103	1018.69	226	1017.98	48	1017.73	23
24	1018.21	100	1017.98	48	1018.33	47	1018.85	70	1018.83	33	1025.10	8190	1019.48	666	1020.37	1490	1018.62	198	1018.56	178	1018.31	103	1017.75	23
25	1018.04	64	1018.29	98	1018.31	43	1018.62	42	1018.79	29	1024.10	6590	1019.17	452	1020.27	1390	1019.96	340	1018.50	160	1018.33	109	1017.87	37
26	1017.94	49	1018.21	82	1018.37	47	1018.73	43	1018.92	37	1026.20	9950	1019.21	477	1019.75	895	1019.42	624	1018.35	115	1018.19	78	1017.75	25
27	1017.87	39	1018.21	82	1018.39	47	1018.75	45	1018.92	37	1026.33	10158	1019.31	547	1019.25	505	1019.37	589	1018.29	98	1018.21	82	1017.89	39
28	1017.87	39	1018.31	103	1018.48	54	1018.69	39	1018.98	43	1022.92	4702	1019.23	491	1018.96	340	1019.25	505	1018.27	94	1018.23	86	1017.75	25
29	1017.85	37	1018.28	96	1018.54	58	1018.79	49	.....	....	1021.62	2916	1018.92	320	1018.81	274	1019.62	778	1018.12	64	1018.21	82	1017.87	37
30	1017.89	39	1018.39	127	1018.44	46	1019.02	84	.....	....	1021.17	2374	1018.87	298	1018.71	234	1019.67	823	1018.17	74	1018.14	68	1017.81	31
31	1017.94	49	.....	....	1018.67	74	1018.94	68	.....	....	1021.33	2566	.....	....	1018.60	190	.....	....	1018.21	82	1018.12	64	.....	...

Monthly Discharge of Grand River near Conestogo for 1916-7

Drainage Area, 550 Square Miles.

Month	Discharge in Second-feet			Discharge in Second-feet per Square Mile			Run-off
	Maximum	Minimum	Mean	Maximum	Minimum	Mean	Depth in Inches on Drainage Area
October (1916)	130	18	47	.24	.03	.08	.09
November "	127	25	53	.23	.05	.10	.11
December.. "	178	43	96	.32	.08	.17	.20
January. . (1917)	94	39	62	.17	.07	.11	.13
February	88	29	40	.16	.05	.07	.07
March.....	10,158	37	1,839	18.47	.07	3.34	3.85
April.....	5,422	298	1,325	9.87	.54	2.41	2.69
May.....	1,608	78	398	2.93	.14	.72	.83
June.	823	103	260	1.50	.19	.47	.52
July.....	4,894	64	1,250	8.90	.12	2.27	2.62
August.....	505	44	93	.92	.08	.17	.20
September.....	82	23	43	.15	.04	.08	.09
The year	10,158	18	463	18.47	.03	.84	11.43

Grand River at Galt

Location—At the Concession Street bridge, in the City of Galt, Township of North Dumfries, County of Waterloo.

Records Available—From July 21, 1913.

Drainage Area—1,360 square miles.

Gauge—Vertical steel staff 0 to 12 feet on first left pier of the bridge. Elevation of zero on gauge is 851.00, which has remained unchanged since established.

Channel and Control—The channel is straight for 1,000 feet above and below the section. The bed is solid rock formation. Residents each year encroach on the natural channel by building up the banks to protect their lots from washing away.

Discharge Measurements—Made from bridge for high stages, and at a permanent wading section 150 feet upstream during low stages.

Winter Flow—Ice slightly affects the relation of gauge height to discharge during the winter, and measurements are made to determine the winter flow.

Regulation—This section is subject to serious fluctuations in the river stage caused by the operation of the Galt dam situated ¼ mile above.

Accuracy—The rating curve is fairly well defined, and records are good.

Observer—Charles Parker, Galt.

Discharge Measurements of Grand River at Galt in 1916-7

Date	Hydrographer	Width in Feet	Area of Section in Sq. Feet	Mean Velocity in Feet per Sec.	Gauge Height in Feet	Discharge in Sec-Feet	Discharge in Second-feet per Square Mile
1916							
Oct. 12....	Roberts, E.	138	192	.99	852.96	189	.....
Dec. 12....	Yeates, W.....	184	650	.78	852.78	507	.....
1917							
Jan. 5....	"	180	564	.88	852.60	496 (a)	.....
Feb. 2....	"	175	477	.62	852.52	296 (a)	.....
Mar. 29....	"	214	1,694	4.06	857.96	6,868 (b)	.....
" 30....	"	199	1,338	2.92	856.29	3,915 (b)	.....
Apr. 3....	Roberts, E.	214	1,937	4.84	859.12	9,373 (b)	.....
" 26....	"	189	856	1.47	853.83	1,260	.....
July 3....	Yeates, W.....	204	1,396	3.04	856.58	4,247	.....
" 30....	Roberts, E.....	142	253	1.38	852.37	348	.....
Aug. 21....	Yeates, W	142	214	1.16	852.16	349	.....
Sept. 28....	"	142	197	1.09	852.08	215	.....
Oct. 13....	"	142	227	1.23	852.23	279	.....

(a) Ice measurements.
(b) Surface velocities recorded and co-efficient applied.

Daily Gauge Height and Discharge of Grand River at Galt for 1916-7

Drainage Area, 1,360 Square Miles

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge
	Feet	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*
1	852.02	174	852.31	264	852.80	500	852.42	310	852.37	288	852.94	506	858.37	7514	853.48	916	853.29	794	855.19	2409	852.34	276	852.12	214
2	852.14	202	852.26	248	852.81	506	852.34	276	852.44	264	853.12	614	859.62	10824	853.71	1077	853.44	888	859.50	10450	852.44	320	852.25	245
3	852.07	184	852.28	254	852.56	380	852.24	242	852.52	296	853.21	668	859.62	10824	853.89	1203	853.29	794	856.71	4405	852.77	485	852.10	210
4	852.02	174	852.20	230	852.46	330	852.25	245	852.39	248	853.21	668	857.37	5496	853.69	1063	853.17	722	855.21	2431	852.42	310	852.26	248
5	852.08	186	852.04	198	852.61	405	852.52	360	852.67	370	853.35	752	856.33	3862	853.79	1133	853.06	656	854.37	1623	852.27	251	852.21	233
6	852.02	174	852.26	248	852.58	390	853.10	680	852.60	335	853.19	656	856.58	4212	853.79	1133	852.96	596	853.77	1119	852.35	280	852.17	224
7	851.98	166	852.21	233	852.77	485	852.75	475	852.48	280	853.08	590	856.12	3568	853.94	1242	853.14	704	853.42	874	852.31	264	852.14	218
8	851.92	154	852.21	233	852.85	530	853.04	644	852.54	305	852.96	518	855.42	2674	853.67	1049	853.21	746	853.87	1189	852.37	288	852.12	214
9	851.88	146	852.29	257	852.73	465	852.75	475	852.60	335	852.89	480	854.92	2120	853.48	916	853.19	734	855.89	3247	852.42	310	852.00	190
10	851.97	164	852.35	280	852.58	390	852.87	542	852.54	305	853.04	566	854.37	1623	853.39	854	853.12	692	858.71	8314	853.06	656	852.12	214
11	852.14	202	852.23	239	852.54	370	852.77	485	852.39	248	852.83	450	853.83	1161	853.31	806	853.04	644	858.46	7718	852.62	410	852.14	218
12	851.97	164	852.23	239	852.62	410	852.75	475	852.60	335	852.98	530	854.08	1362	853.00	620	852.96	596	857.12	5054	852.37	288	852.17	224
13	852.08	186	852.26	248	852.56	380	852.64	420	852.58	325	853.17	644	854.79	2001	852.79	495	852.87	542	856.46	4044	852.33	272	852.19	228
14	852.06	182	852.35	280	852.37	288	852.75	475	852.48	280	853.33	740	854.33	1587	852.71	455	853.29	794	857.37	5496	852.35	280	852.10	210
15	852.08	186	852.33	272	852.42	310	852.62	410	852.54	305	853.42	794	853.96	1258	852.62	410	853.87	1189	856.79	4525	852.28	254	852.00	190
16	852.10	190	852.27	251	852.48	340	852.71	455	852.48	280	853.42	794	853.69	1063	852.52	360	853.67	1049	855.71	3022	852.25	245	851.87	164
17	852.09	188	852.23	239	852.39	296	852.73	465	852.42	257	853.81	1056	853.42	874	852.52	360	853.08	668	854.58	1812	852.20	230	852.04	198
18	852.06	182	852.23	239	852.31	264	852.79	495	852.31	226	854.23	1380	853.33	818	852.46	330	853.04	644	854.33	1587	852.10	210	852.04	198
19	852.21	223	852.00	190	852.37	288	852.48	340	852.50	288	854.33	1470	853.48	916	852.43	315	853.12	692	854.04	1326	852.00	190	851.98	186
20	852.52	330	852.23	239	852.25	245	852.37	288	852.48	280	854.29	1434	853.83	1161	852.81	506	853.44	888	853.77	1119	852.10	210	852.06	202
21	852.75	460	852.08	206	852.17	224	852.39	296	852.56	315	854.21	1362	854.71	1929	853.04	644	853.10	680	853.58	986	852.08	206	852.07	204
22	852.75	460	852.08	206	852.10	210	852.37	288	852.50	385	854.77	1866	855.04	2244	853.08	668	852.83	518	853.31	806	852.12	214	852.04	198
23	852.59	365	852.23	239	852.04	198	852.42	310	852.54	305	855.89	3082	854.60	1830	854.25	1515	852.60	400	853.12	692	852.42	310	851.82	154
24	852.52	330	852.27	251	852.17	224	852.42	310	852.48	280	862.83	25390	854.21	1479	855.62	2914	852.85	530	852.94	584	852.39	296	852.06	202
25	852.51	325	852.06	202	852.18	226	852.48	340	852.37	242	861.12	16800	853.71	1077	855.75	3070	853.10	680	852.77	485	852.39	296	852.10	210
26	852.42	288	851.96	182	852.37	288	852.44	320	852.64	355	862.54	23950	853.96	1258	854.87	2073	853.96	1258	852.67	435	852.37	288	852.11	212
27	852.34	262	852.39	296	852.33	272	852.46	330	852.71	390	862.50	23750	853.92	1226	854.27	1533	855.29	2519	852.56	380	852.39	296	852.04	198
28	852.29	247	852.48	340	852.50	350	852.33	272	852.77	420	860.25	13035	853.79	1133	853.92	1226	854.56	1794	852.42	310	852.42	310	852.08	206
29	852.17	211	852.60	400	852.42	310	852.44	320	.....	.....	857.83	6380	853.62	1014	853.54	958	854.25	1515	852.42	310	852.35	280	852.00	190
30	852.23	229	852.56	380	852.39	296	852.44	320	.....	.....	856.62	4270	853.48	916	853.27	782	855.12	2332	852.35	280	852.31	264	851.77	144
31	852.25	235	.....	....	852.33	272	852.39	296	.....	.....	856.71	4405	.....	.....	853.08	668	.....	.....	852.34	276	852.21	233	.....	.....

Monthly Discharge of Grand River at Galt for 1916-7

Drainage Area, 1,360 Square Miles

Month	Discharge in Second-feet			Discharge in Second-feet per Square Mile			Run-off
	Maximum	Minimum	Mean	Maximum	Minimum	Mean	Depth in Inches on Drainage Area
October... (1916)	460	146	231	.34	.11	.17	.20
November. "	400	182	253	.29	.13	.19	.21
December. "	530	198	337	.39	.15	.25	.29
January .. (1917)	680	242	386	.50	.18	.28	.32
February.....	420	226	305	.31	.17	.22	.23
March.....	25,390	450	4,503	18.67	.33	3.31	3.82
April.....	10,824	818	2,634	7.96	.60	1.94	2.16
May.....	3,070	315	1,009	2.26	.23	.74	.85
June.....	2,519	400	909	1.85	.29	.67	.75
July.....	10,450	276	2,494	7.69	.20	1.83	2.11
August.....	656	190	291	.48	.14	.21	.24
September.....	248	144	205	.18	.11	.15	.17
The year.....	25,390	144	1,138	18.67	.11	.84	11.36

Grand River at Glen Morris

Location—At the Glen Morris bridge, in the Village of Glen Morris, Township of South Dumfries, County of Brant.

Records Available—Discharge measurements from August, 1912. Daily gauge heights, from July 21, 1913.

Drainage Area—1,390 square miles.

Gauge—Vertical steel staff 0 to 12 feet on the second pier from the left bank. Elevation of the zero on gauge is 801.00, which has remained unchanged since established.

Channel and Control—The channel is straight for 1,000 feet above and below the section. The bed of the river is composed of gravel and boulders, and banks are permanent. The bed and control is shifting under high water conditions.

Discharge Measurements—Made from bridge during the high water stages, and at permanent wading section located 150 feet upstream during the lower water periods.

Winter Flow—This section is seriously affected by ice which usually floods, forming as many as three or four layers of ice with water between them. Measurements are made during the winter months to determine the winter flow.

Regulation—This section is subject to fluctuations in the river stage, due to the storing of water, during the night and at week ends, by the Galt dam, located eight miles above.

Accuracy—Owing to poor natural conditions, the liability of the control to shift and back water caused by ice, the records cannot be considered better than fair.

Observer—Alfred Forbes, Glen Morris P.O.

Discharge Measurements of Grand River at Glen Morris in 1916-7

Date	Hydrographer	Width in Feet	Area of Section in Sq. Feet	Mean Velocity in Feet per Sec.	Gauge Height in Feet	Discharge in Sec-Feet	Discharge in Second-feet per Square Mile
1916							
Oct. 12....	Yeates, W.	171	167	1.15	802.37	192	.....
Dec. 13....	"	277	403	.98	802.54	396 (a)	.....
1917							
Jan. 20....	"	247	289	1.18	803.77	342 (a)	.....
Feb. 3....	"	210	250	1.19	803.81	298 (a)	.....
Mar. 6....	Roberts, E.	248	319	1.35	804.58	429 (b)	.....
Apr. 26....	"	276	702	2.18	803.60	1,533	.....
July 28....	"	188	245	1.89	802.70	463	.....
Aug. 22....	" ..	187	196	1.38	802.52	276	.....
Sept. 28....	Yeates, W.	182	170	1.12	802.39	191	.....
Oct. 25....	" ...	272	463	.99	802.72	458	.....

(a) Ice measurement.
(b) Ice measurement. Some velocities estimated.

Daily Gauge Height and Discharge of Grand River at Glen Morris for 1916-7

Drainage Area. 1,390 Square Miles

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge
	Feet	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*
1	802.37	375	802.50	230	802.87	540	803.33	364	803.96	434	804.46	434	806.54	8578	803.33	1059	803.12	812	805.58	5768	802.62	316	802.54	258
2	802.37	375	802.42	190	802.92	590	803.37	398	803.92	398	804.62	590	807.54	8578	803.54	1364	803.29	1008	808.85	18130	802.67	356	802.54	258
3	802.33	355	802.50	230	802.79	461	803.37	356	803.87	356	804.50	470	807.75	12955	803.62	1492	803.21	912	806.67	9001	802.83	500	802.46	210
4	802.37	375	802.46	210	802.71	389	803.42	398	803.79	293	804.50	470	806.08	7182	803.54	1364	803.12	812	804.62	3424	802.71	389	802.54	258
5	802.33	355	802.42	190	802.75	425	803.67	590	803.96	434	804.67	540	805.33	5118	803.33	1059	803.08	768	804.00	2150	802.54	258	802.62	316
6	802.33	355	802.42	190	802.71	389	803.83	770	803.92	398	804.58	452	805.37	5222	803.46	1240	803.00	680	803.58	1428	802.58	286	802.54	258
7	802.33	355	802.42	190	802.79	461	803.79	670	803.87	356	804.50	380	805.12	4590	803.62	1492	803.00	680	803.29	1008	802.54	258	802.50	230
8	802.21	304	802.42	190	802.92	590	803.79	670	803.96	348	804.58	452	804.67	3534	803.54	1364	803.04	724	803.29	1008	802.62	316	802.54	258
9	802.29	336	802.46	210	802.75	425	803.83	660	803.87	279	804.58	452	804.33	2803	803.46	1240	803.00	680	803.92	2006	802.62	316	802.33	152
10	802.29	336	802.54	258	802.75	340	803.87	700	803.79	225	804.54	416	804.00	2150	803.37	1111	803.00	680	806.62	8836	803.12	812	802.54	258
11	802.29	336	802.54	258	802.71	308	803.87	645	803.79	225	804.58	452	803.71	1637	803.21	912	803.00	680	806.92	9850	802.87	540	802.54	258
12	802.29	336	802.54	258	802.85	364	803.92	700	803.87	279	804.92	810	803.75	1705	803.12	812	802.96	636	805.83	6457	802.67	356	802.46	210
13	802.37	375	802.54	258	802.58	195	803.87	590	803.87	215	805.12	1050	804.42	2992	802.96	636	802·87	540	805.33	5118	802.58	286	802.37	168
14	802.37	375	802.50	230	802.67	215	803.87	590	803.92	244	805.75	2060	804.21	2560	802.87	540	803.04	724	805.87	6573	802.67	356	802.46	210
15	802.46	426	802.54	258	803.42	925	803.75	425	804.00	300	805.75	2060	803.58	1428	802.83	500	803.46	1240	805.83	6457	802.58	286	802.46	210
16	802.46	426	802.50	230	803.50	960	803.83	500	804.00	300	805.37	1410	803.46	1240	802.79	461	803.42	1180	804.92	4108	802.58	286	802.37	168
17	802.42	402	802.46	210	803.75	1300	803.79	416	804.00	300	805.58	1760	803.46	1240	802.71	389	803.21	912	804.21	2560	802.54	258	802.33	152
18	802.37	375	802.37	168	803.92	1490	803.83	452	803.92	190	805.21	1170	803.37	1111	802.71	389	803.17	867	804.00	2150	802.46	210	802.29	137
19	802.46	426	802.46	210	803.87	1410	803.79	372	803.96	210	805.25	1220	803.37	1111	802.75	425	803.42	1180	803.71	1637	802.37	168	802.37	168
20	802.79	680	802.46	210	803.67	1050	803.79	372	803.96	210	805.00	900	803.46	1240	802.96	636	803.37	1111	803.58	1428	802.46	210	802.42	190
21	802.96	855	802.42	190	803.50	845	803.75	340	804.00	230	805.87	3530	804.17	2480	803.04	724	803.12	812	803.50	1300	802.46	210	802.37	168
22	802.87	760	802.37	168	803.29	560	803.79	372	804.04	258	806.17	5740	804.46	3076	803.00	680	802.96	636	803.37	1111	802.46	210	802.33	152
23	802.83	720	802.54	258	803.50	790	803.79	372	804.08	220	805.25	4920	804.21	2560	804.08	2302	802.87	540	803.21	912	802.54	258	802.25	125
24	802.75	645	802.62	316	803.33	550	803.79	372	804.08	220	808.50	16350	803.92	2006	805.17	4715	802.96	636	803.17	867	802.62	316	802.29	137
25	802.67	665	802.46	210	803.33	550	803.79	372	804.08	220	810.04	24570	803.58	1428	804.87	3991	803.25	960	802.96	636	802.67	356	802.37	168
26	802.58	505	802.71	389	803.25	425	803.79	372	804.25	340	810.67	28270	803.58	1428	804.37	2887	803.54	1364	802.83	500	802.67	356	802.33	152
27	802.54	478	802.75	425	803.37	540	803.79	372	804.25	340	810.71	28510	803.58	1428	803.83	1844	804.50	3160	802.79	461	802.62	316	802.37	168
28	802.46	426	802.67	356	803.29	416	803.71	237	804.37	356	809.08	19334	803.54	1364	803.50	1300	804.08	2302	802.71	389	802.67	356	802.37	168
29	802.46	426	802.75	425	803.33	452	803.87	356	.....	....	806.71	9134	803.37	1111	803.25	960	803.92	2006	802.62	316	802.71	389	802.37	168
30	802.50	450	802.79	461	803.42	490	803.87	356	.....	....	805.33	5118	803.33	1059	803.21	912	804.46	3076	802.62	316	802.62	316	802.29	137
31	802.46	426	.....	....	803.29	372	803.96	434	.....	....	805.12	4590	.....	.....	803.00	680	.....	....	802.62	316	802.62	316	.....	....

Monthly Discharge of Grand River at Glen Morris for 1916-7

Drainage Area, 1,390 Square Miles

Month	Discharge in Second-feet			Discharge in Second-feet per Square Mile			Run-off
	Maximum	Minimum	Mean	Maximum	Minimum	Mean	Depth in Inches on Drainage Area
October (1916)	855	304	453	.62	.22	.33	.38
November "	461	168	253	.33	.12	.18	.20
December "	1,490	195	607	1.07	.14	.44	.51
January .. (1917)	770	237	471	.55	.17	.34	.39
February	434	190	292	.31	.14	.21	.22
March.....	28,510	380	5,407	20.51	.27	3.89	4.48
April.....	12,955	1,111	3,164	9.32	.80	2.28	2.54
May.....	4,715	389	1,274	3.39	.28	.92	1.06
June	3,160	540	1,077	2.27	.39	.77	.86
July.....	18,130	316	3,426	13.04	.23	2.46	2.84
August.....	812	168	328	.58	.12	.24	.28
September	316	125	196	.23	.09	.14	.16
The year.....	28,510	125	1,424	20.51	.09	1.02	13.90

Grand River at York

Location—At the highway bridge in the Village of York, Township of Oneida, County of Haldimand.

Records Available—From June 25, 1913.

Drainage Area—2,280 square miles.

Gauge—Vertical steel staff 0 to 6 feet on the first pier from left abutment and 6 to 12 feet on the left abutment. The elevation of zero is 593.00, and has remained unchanged since established.

Channel and Control—The flow is confined between the abutments of the bridge at all stages. The bed of the river is well protected, but shifting during flood stages. A partly demolished dam about 200 feet downstream affects flow, especially at low stages. Part of this old dam is washed out at each flood period.

Discharge Measurements—Taken from the highway bridge, and at a permanent low water section located 800 feet above during the low water period.

Floods—No floods of a serious nature have occurred here since the spring of 1912, when the dam below the bridge was wrecked, the water cutting around the right abutment, greatly increasing the width of the channel. Village residents state the water rose to a gauge height of 606 feet, which would mean approximately 100,000 second feet.

Winter Flow—The relation of gauge height to discharge is seriously affected by ice, and measurements are made to determine the winter flow.

Regulation—The nearest dam is at Caledonia, five miles above. The intermittent operation of the mills causes daily fluctuations in the gauge heights.

Accuracy—The conditions of flow are good, except for the fluctuations caused through the Caledonia Mills. Well-defined rating curves have been established, and the records can be considered good. Semi-daily gauge heights will not give a good representative mean.

Observer—Fred. Brown, York P.O.

Discharge Measurements of Grand River at York in 1917

Date	Hydrographer	Width in Feet	Area of Section in Sq. Feet	Mean Velocity in Feet per Sec.	Gauge Height in Feet	Discharge in Sec-Feet	Discharge in Second-feet per Square Mile
1917							
Jan. 4....	Yeates, W.	370	1009	.67	594.17	674 (a)	.....
" 19....	"	332	940	.80	594.37	755 (a)	.....
Feb. 1....	"	330	907	.70	594.25	636 (a)	.....
Mar. 1....	Roberts, E.....	377	1,178	1.23	595.35	1,457 (b)	.....
" 26....	"	400	3,475	7.41	600.02	25,749 (c)	.....
" 27....	"	400	3,795	8.29	600.83	31,460 (c)	.....
" 28....	"	400	3,676	8.29	600,56	30,488 (c)	.....
" 28....	"	400	3,616	7.77	600.42	28,082 (c)	.....
Apr. 2....	Yeates, W.....	382	2,894	5.25	598.58	15,192 (c)	.....
" 3....	Roberts, E.....	400	3,117	6.22	599.17	19,403 (c)	.....
" 3....	"	400	3,117	6.00	599.17	18,708 (c)	.....
" 3....	"	400	3,106	5.86	599.10	18,204 (c)	.....
" 4....	"	382	2,780	4.98	598.27	13,830 (c)	.....
" 4....	"	382	2,674	4.60	598.02	12,308 (c)	.....
" 4....	"	382	2,474	4.67	597.48	11,553 (c)	.....
" 24....	"	350	1,635	1.85	595.23	3,022 (d)	.....
May 18....	Yeates, W.....	340	1,187	.76	593.96	897	.....
July 30....	Roberts, E.....	340	1,187	.75	593.90	894	.....
Aug. 24....	Yeates, W.....	336	1,085	.63	593.67	679	.....
Oct. 11....	"	338	1,018	.53	593.48	534	.....
" 12....	"	338	1,018	.54	593.47	547	.....

(a) Ice measurement.
(b) Ice measurement. Mostly all estimated velocities.
(c) Surface velocities recorded and co-efficient applied.
(d) Part of dam below has been washed out.

Daily Gauge Height and Discharge of Grand River at York for 1916-7

Drainage Area, 2,280 Square Miles

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge
	Feet	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*
1	593.14	276	593.71	690	594.21	1320	594.33	865	594.21	590	595.33	1430	596.50	6350	594.48	1748	594.96	2564	596.12	5226	593.79	780	593.64	620
2	593.39	396	593.71	690	594.08	1120	594.25	755	594.33	715	595.27	1330	598.19	13310	594.42	1652	594.94	2526	598.67	15852	593.79	780	593.58	565
3	593.50	460	593.69	670	594.08	1120	594.29	780	594.33	660	595.12	1140	599.12	18578	594.77	2219	594.71	2117	597.75	11205	593.89	890	593.62	600
4	593.48	448	593.60	580	594.04	1070	594.12	600	594.10	430	594.92	865	597.87	11752	594.85	2360	594.56	1876	596.39	6010	594.00	1020	593.54	530
5	593.42	412	593.46	472	594.00	1020	594.62	1180	594.10	405	594.73	660	597.00	8090	594.83	2324	594.46	1716	595.71	4174	593.87	865	593.58	565
6	593.42	412	593.60	580	594.12	1180	594.75	1260	594.08	372	594.83	770	596.87	7602	594.67	2052	594.35	1540	595.17	2970	593.83	825	593.62	600
7	593.46	436	593.58	565	594.06	1100	594.77	1400	594.12	368	594.73	660	597.21	8920	594.81	2288	595.42	3504	594.75	2185	593.75	735	593.58	565
8	593.23	315	593.58	565	594.04	1070	594.83	1480	594.29	425	594.87	810	596.58	6606	594.83	2324	595.35	3350	594.79	2253	593.75	735	593.60	580
9	593.33	365	593.67	650	594.25	1380	594.81	1430	594.25	380	595.17	1180	596.21	5479	594.64	2004	595.02	2678	595.17	2970	593.83	825	593.54	530
10	593.42	412	593.62	600	594.04	1050	594.98	1700	594.29	376	595.17	1180	595.79	4366	594.50	1780	594.69	2084	597.17	8760	593.83	825	593.52	515
11	593.42	412	593.56	550	594.17	1200	594.67	1200	594.12	307	595.87	2400	595.31	3262	594.35	1540	594.52	1812	598.04	12566	594.25	1380	593.50	500
12	593.33	365	593.46	472	594.08	1050	594.56	1030	594.27	348	596.54	3890	595.08	2792	594.12	1180	594.35	1540	597.29	9240	594.04	1070	593.50	500
13	593.33	365	593.62	600	594.04	970	594.50	950	594.29	356	596.58	4100	595.25	3135	594.21	1316	594.25	1380	596.79	7315	593.92	925	593.50	500
14	593.46	436	593.77	755	593.98	880	594.44	880	594.25	340	596.46	3930	595.31	3262	594.14	1210	594.23	1348	596.29	5711	593.79	780	593.29	376
15	593.27	335	593.83	825	594.29	1260	594.42	845	594.25	340	596.71	4670	595.04	2716	594.10	1150	594.46	1716	597.50	10110	593.75	735	593.27	368
16	593.42	412	593.73	715	594.00	855	594.44	855	594.23	334	596.33	3980	594.83	2324	594.00	1020	594.79	2253	596.37	5950	593.69	670	593.14	322
17	593.71	620	593.60	580	593.98	810	594.31	715	594.21	328	596.42	4440	594.67	2052	594.00	1020	594.83	2324	595.92	4692	593.71	690	593.33	395
18	593.48	448	593.71	690	594.37	1290	594.33	725	593.96	291	596.56	5060	594.62	1972	593.89	890	594.54	1844	595.85	4515	593.67	650	593.33	395
19	593.50	460	593.50	500	594.37	1260	594.31	690	594.00	295	596.71	7040	594.46	1716	593.79	780	594.35	1540	595.52	3726	593.50	500	593.35	405
20	593.79	680	593.48	486	594.17	960	594.33	715	594.39	400	596.50	6350	594.60	1940	594.10	1150	594.58	1908	595.23	3093	593.56	550	593.35	405
21	594.12	1040	593.64	620	594.04	790	594.17	555	594.44	425	596.33	5830	594.79	2253	594.50	1780	594.77	2219	595.00	2640	593.67	650	593.42	444
22	594.17	1100	593.64	620	594.25	1010	594.08	486	594.42	415	596.21	5480	595.37	3394	594.56	1876	594.48	1748	594.81	2288	593.50	500	593.37	415
23	594.21	1150	593.52	515	594.37	1140	594.14	530	594.21	328	596.54	6480	595.75	4270	594.71	2117	594.25	1380	594.58	1908	593.52	515	593.25	360
24	594.04	950	593.77	755	594.33	1060	594.12	516	594.27	348	597.58	10450	595.27	3177	596.12	5226	594.12	1180	594.33	1508	593.62	600	593.33	395
25	593.87	760	593.71	690	594.33	1030	594.14	530	594.02	297	599.92	24180	595.04	2716	596.21	5479	594.27	1412	594.25	1380	593.75	735	593.46	472
26	593.81	700	593.58	565	594.29	960	594.12	515	594.75	680	600.14	25850	594.89	2432	596.21	5479	594.79	2253	594.37	1572	593.62	600	593.37	415
27	593.79	680	593.54	530	594.25	890	594.12	515	595.67	1970	600.56	29220	594.83	2324	595.62	3958	595.69	4126	594.21	1316	593.71	690	593.35	405
28	593.69	600	593.83	825	594.17	780	594.08	486	595.37	1490	600.50	28730	594.79	2253	595.17	2970	596.31	5770	594.12	1180	593.71	690	593.33	395
29	593.58	515	593.89	890	594.42	1050	594.08	486	.....	.....	598.19	13310	594.75	2185	594.92	2488	596.75	4270	593.96	970	593.69	670	593.37	415
30	593.62	545	593.94	950	594.33	910	594.12	515	.....	.....	597.00	8090	594.46	1716	594.81	2288	595.62	3958	593.96	970	593.71	690	593.39	376
31	593.64	560	.....	.....	594.29	845	594.12	515	.....	.....	596.33	5830	.....	.....	594.52	1812	.....	.....	593.87	870	593.67	650	.....	.....

Monthly Discharge of Grand River at York for 1916-7

Drainage Area, 2,280 Square Miles

Month	Discharge in Second-feet			Discharge in Second-feet per Square Mile			Run-off
	Maximum	Minimum	Mean	Maximum	Minimum	Mean	Depth in Inches on Drainage Area
October. (1916)	1150	276	550	.50	.12	.24	.28
November "	950	472	640	.42	.21	.28	.31
December "	1,380	780	1,046	.61	.34	.46	.53
January (1917)	1,700	486	832	.75	.21	.36	.42
February	1,970	291	501	.86	.13	.22	.23
March	29.220	660	7,080	12.82	.29	3.10	3.57
April	18,578	1,716	4,765	8.14	.75	2.09	2.33
May	5,479	780	2,175	2.40	.34	.95	1.10
June	5,770	1,180	2,331	2.53	.52	1.02	1.14
July	15,852	870	4,681	6.95	.38	2.05	2.36
August	1,380	500	750	.61	.22	.33	.38
September	620	322	464	.27	.14	.20	.22
The year	29,220	276	2,166	12.82	.12	.95	12.895

Nith River near Canning

Location—At the highway bridge 200 feet upstream from the Grand Trunk Railway bridge, lot 2, concession 2, Township of Blenheim, County of Oxford, 1 mile from the Village of Canning.

Records Available—From July 5, 1913.

Drainage Area—430 square miles.

Gauge—Vertical steel staff 0 to 3 feet on pile in centre of stream and 3 to 12 feet on left abutment. Elevation of zero on gauge is 799.00, which has remained unchanged since established.

Channel and Control—Slightly shifting bed; both banks permanent under ordinary conditions. Control only affected by ice jams during the early freshet.

Discharge Measurements—Made from the bridge during high-water stages, and from a permanent wading section 100 feet above during the low-water period.

Winter Flow—The relation of gauge height to discharge is seriously affected by ice during the winter, and measurements are made to determine the winter flow.

Regulation—Fluctuations of a serious nature occur in the river stage at this section, caused through the intermittent operation of the milling plant at Canning, 1½ miles above.

Accuracy—On account of stage variations, these records are not very reliable.

Observer—Lewis Baker, Canning P.O.

Discharge Measurements of Nith River near Canning in 1916-7

Date	Hydrographer	Width in Feet	Area of Section in Sq. Feet	Mean Velocity in Feet per Sec.	Gauge Height in Feet	Discharge in Sec-Feet	Discharge in Second-feet per Square Mile
1916							
Nov. 2....	Yeates, W.....	93	79	1.77	801.17	140	.....
Dec. 11....	"	94	87	2.10	801.32	182	.....
1917							
Jan. 3....	"	95	80	1.85	801.94	149 (a)	.....
" 17....	"	97	94	1.93	802.30	181 (a)	.....
Feb. 8....	"	95	54	1.12	801.52	61 (a)	.....
Mar. 3....	Roberts, E.	97	104	1.87	802.85	195 (a)	.....
Apr. 25....	"	96	130	2.96	802.06	386 (b)	.....
May 26....	Yeates, W.....	115	414	3.07	803.60	1,273	.....
June 11....	Roberts, E.....	94	110	2.37	801.67	259	.....
July 27....	"	95	102	2.28	801.19	233	.....
Aug. 22....	Yeates, W.....	93	57	1.47	800.92	84	.....
" 23....	Roberts, E.....	93	72	1.74	801.14	126	.....
ept . 18....	Yeates, W.....	93	74	1.53	801.12	114	.....
Sct. 22....	"	95	109	2.28	801.64	249	.....

(a) Ice measurement.
(b) Surface velocities recorded and co-efficient applied.

Daily Gauge Height and Discharge of Nith River near Canning for 1916-7

Drainage Area, 430 Square Miles

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge
	Feet	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*
1	800.98	107	801.04	111	801.37	174	802.00	180	802.21	162	802.52	144	803.33	1020	801.71	263	802.04	374	804.08	1530	801.14	128	801.27	154
2	800.77	82	801.10	120	801.33	166	801.96	172	802.10	140	802.60	160	804.31	1700	801.92	332	802.06	381	805.79	2990	801.25	150	800.71	62
3	800.92	98	801.02	108	801.23	146	801.92	144	802.02	124	802.64	148	805.44	2670	802.46	545	801.89	322	806.04	3222	801.25	150	801.06	114
4	800.98	107	801.06	114	801.39	178	801.98	156	801.85	98	802.73	166	803.96	1440	802.44	535	801.67	251	803.71	1260	801.10	120	801.21	142
5	801.04	116	800.85	83	801.44	190	802.12	185	801.81	92	802.67	154	803.35	1030	802.10	395	801.73	269	802.29	466	801.48	200	801.19	138
6	800.94	101	801.14	128	801.29	158	802.44	272	801.92	108	802.64	148	803.79	1310	801.98	353	801.79	287	801.96	346	801.29	158	801.12	124
7	800.98	107	801.14	128	801.23	146	802.42	266	801.96	114	802.77	174	804.25	1650	801.98	353	802.25	450	801.77	381	801.21	142	801.12	124
8	800.85	90	801.04	111	801.14	128	802.44	272	801.62	63	802.77	174	803.75	1290	802.10	395	802.19	427	802.06	381	801.18	136	801.23	146
9	800.87	92	801.10	120	801.35	170	802.31	233	801.87	85	802.64	148	802.96	805	801.89	322	801.81	294	803.04	847	801.35	170	800.83	79
10	800.81	86	800.98	102	801.14	128	802.29	227	801.92	93	802.64	148	802.25	450	801.75	275	801.69	257	805.17	2420	801.58	225	800.89	88
11	800.89	94	801.23	146	801.35	170	802.31	207	801.98	102	802.87	198	802.21	434	801.73	269	801.48	200	804.94	2220	801.39	178	801.08	117
12	800.94	101	801.12	124	801.23	126	802.27	198	802.12	124	803.75	492	802.06	381	801.54	215	801.35	170	804.14	1570	801.35	170	801.06	114
13	801.04	116	801.33	166	801.50	180	802.29	202	802.08	117	804.56	915	802.10	395	801.31	162	801.27	154	803.89	1380	801.29	158	801.19	138
14	801.14	133	801.14	128	801.64	215	802.33	213	802.04	111	805.39	1460	802.04	374	801.52	210	801.42	185	803.54	1150	801.23	146	801.19	138
15	801.04	116	801.12	124	802.02	332	802.35	217	802.06	99	805.31	1400	802.02	367	801.39	178	801.79	287	804.67	1980	801.27	154	801.14	128
16	800.56	63	801.00	105	802.25	343	802.27	198	802.08	102	804.69	995	802.02	367	801.27	154	802.31	475	804.21	1620	801.19	138	801.19	138
17	801.00	110	801.02	108	802.35	378	802.23	166	802.10	105	804.71	1010	802.02	367	801.37	174	801.79	287	803.67	1240	801.06	114	801.14	128
18	801.27	162	801.14	128	802.31	364	802.19	158	801.94	81	805.73	1710	801.92	332	801.25	150	801.71	263	803.10	880	801.19	138	801.19	138
19	801.37	191	801.14	128	802.31	294	802.10	140	801.60	36	805.83	1790	801.92	332	801.44	190	801.48	200	802.75	690	800.94	96	801.14	128
20	801.44	212	801.04	111	802.23	269	802.21	162	801.75	41	805.31	1400	802.00	360	801.71	263	803.33	1020	802.21	434	800.96	96	801.12	124
21	801.44	212	801.02	108	802.19	257	802.08	136	802.35	130	805.44	1800	802.12	402	802.14	409	802.33	484	802.06	381	801.19	138	801.19	138
22	801.31	173	801.02	108	802.14	242	802.10	140	802.25	113	805.62	2290	802.02	367	802.23	442	801.72	266	801.96	346	800.79	74	801.14	128
23	801.29	167	801.06	114	802.08	200	802.23	166	802.27	115	805.12	2110	802.23	442	802.44	535	801.46	195	801.85	308	801.10	120	801.10	120
24	801.23	152	801.14	128	802.19	228	802.29	178	802.27	115	806.46	3613	802.14	409	804.52	1860	801.44	190	801.77	281	801.21	142	801.19	138
25	801.17	139	801.25	150	802.14	215	802.25	170	802.37	134	807.64	4710	802.14	409	804.94	2220	801.52	210	801.77	281	801.31	162	800.79	73
26	801.14	133	801.52	210	802.25	245	802.19	158	802.56	152	806.77	3901	802.02	367	803.87	1370	801.87	315	801.67	251	800.98	102	801.02	108
27	801.14	133	801.35	170	802.27	251	802.04	128	802.60	160	805.29	2530	802.10	395	802.85	745	804.48	1830	801.48	200	800.90	90	800.71	61
28	801.12	129	801.25	150	802.33	269	801.98	117	802.56	152	804.06	1510	801.73	269	802.42	525	803.87	1370	801.42	185	801.14	128	800.58	44
29	800.81	86	801.35	170	802.19	228	802.12	144	.....	.....	803.79	1310	801.71	263	802.08	388	803.37	1040	801.25	150	801.19	138	801.06	114
30	801.08	122	801.44	190	802.10	205	802.25	170	.....	.....	803.73	1275	801.69	257	801.98	353	803.33	1020	801.23	146	801.23	146	801.10	120
31	801.04	116	.....	.....	802.04	190	802.27	174	.....	.....	803.50	1125	.....	.....	801.83	301	.....	.....	801.29	158	801.21	142	.....	.....

Monthly Discharge of Nith River near Canning for 1916-7

Drainage Area, 430 Square Miles

Month	Discharge in Second-feet			Discharge in Second-feet per Square-mile			Run-off
	Maximum	Minimum	Mean	Maximum	Minimum	Mean	Depth in Inches on Drainage Area
October (1916)	212	63	124	.49	.15	.29	.33
November "	210	83	130	.49	.19	.30	.33
December. "	378	126	219	.88	.29	.51	.59
January.. (1917)	272	117	182	.63	.27	.42	.48
February	162	36	110	.38	.08	.26	.27
March.....	4,710	144	1,262	10.95	.33	2.93	3.38
April	2,670	257	688	6.21	.60	1.60	1.79
May.....	2,220	150	481	5.16	.35	1.12	1.29
June	1,830	154	449	4.26	.36	1.04	1.16
July.....	3,222	146	958	7.49	.34	2.23	2.57
August	225	74	140	.52	.17	.33	.38
September	154	61	117	.36	.14	.27	.30
The year.....	4,710	36	408	10.95	.08	.95	12.88

Speed River near Guelph

Location—At Caraher's highway bridge above the junction of the Speed and Eramosa Rivers and 3¾ miles from the City of Guelph, Township of Guelph, County of Wellington.

Records Available—From October 27, 1913.

Drainage Area—77 square miles.

Gauge—Vertical steel staff 0 to 12 feet, one on each abutment of bridge. Elevation of zero on each gauge is 1126.00, which has remained unchanged since established.

Channel and Control—The channel is straight for 250 feet above and 500 feet below the gauging section. During flood stages the control and banks are liable to shift, as the bed is composed of loose gravel. One channel exists at all stages.

Discharge Measurements—Made from the bridge and from a permanent low water section 300 feet downstream.

Winter Flow—The relation of gauge height to discharge is seriously affected by ice during the winter season, and measurements are taken during that period to determine the winter flow.

Regulation—A small mill is operated one mile and a half upstream. Slight fluctuations are caused only in the dry season, and are hardly noticeable at the gauge.

Accuracy—The open channel rating curve is fairly well defined for flows up to 500 second feet, the discharge for low flows being considered good.

Observer—Hugh Caraher, Guelph.

Discharge Measurements of Speed River near Guelph in 1916-7

Date	Hydrographer	Width in Feet	Area of Section in Sq. Feet	Mean Velocity in Feet per Sec.	Gauge Height in Feet	Discharge in Sec-Feet	Discharge in Second-feet per Square Mile
1916							
Oct. 6....	Yeates, W.....	49	13	.26	1,127.98	3	.....
1917							
April 3....	"	70	175	2.20	1,129.61	385	.....
May 14....	"	55	40	.82	1,128.29	33	.....
" 22....	"	57	52	1.13	1,128.46	59	.....
June 22....	Roberts, E.....	54	34	.72	1,128.23	24	.....
Sept. 25....	Yeates, W.....	51	16	.22	1,128.00	3	.....
Oct. 27....	"	54	37	.75	1,128.27	27	.....

Daily Gauge Height and Discharge of Speed River near Guelph for 1916-7

Drainage Area, 77 Square Miles

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge
	Feet	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*
1	1127.92	8	1128.08	11	1128.29	36	1128.71	24	1129.02	26	1129.56	46	1129.67	445	1128.62	99	1128.33	41	1130.50	775	1128.00	4	1128.08	11
2	1127.92	8	1128.08	11	1128.19	22	1128.67	20	1129.04	29	1129.56	46	1130.14	635	1128.67	111	1128.39	50	1129.87	525	1128.00	4	1128.08	11
3	1127.92	8	1128.08	11	1128.17	20	1128.71	24	1129.06	31	1129.58	49	1129.89	535	1128.56	86	1128.37	47	1128.96	186	1128.12	15	1128.00	4
4	1127.92	8	1128.08	11	1128.25	30	1128.67	20	1129.08	34	1129.62	40	1129.27	286	1128.54	81	1128.35	45	1128.71	120	1128.00	4	1128.00	4
5	1127.92	8	1128.08	11	1128.21	24	1128.79	36	1129.12	40	1129.62	40	1129.10	227	1128.58	90	1128.27	33	1128.54	81	1128.00	4	1128.00	4
6	1127.92	8	1128.08	11	1128.25	30	1128.87	33	1129.12	40	1129.67	47	1128.96	186	1128.58	90	1128.27	33	1128.46	65	1128.06	9	1128.00	4
7	1127.92	8	1128.08	11	1128.21	24	1129.92	40	1129.08	34	1129.64	43	1128.96	186	1128.62	99	1128.31	39	1128.23	27	1128.00	4	1128.00	4
8	1127.92	8	1128.12	15	1128.25	30	1128.92	40	1129.19	36	1129.58	34	1128.83	151	1128.50	73	1128.42	56	1128.39	50	1128.06	9	1128.00	4
9	1127.92	8	1128.12	15	1128.25	30	1128 96	46	1129.17	33	1129.62	40	1128.75	130	1128.50	73	1128.44	60	1128.71	120	1128.52	77	1128.00	4
10	1127.92	8	1128.04	8	1128.17	20	1128.96	46	1129.12	26	1129.54	17	1128.60	94	1128.46	65	1128.33	41	1129.17	251	1128.33	41	1128.00	4
11	1127.92	8	1128.00	4	1128.17	10	1128.85	30	1129.08	21	1129.54	17	1128.58	90	1128.33	41	1128.29	36	1129.25	280	1128.21	24	1128.00	4
12	1127.92	8	1128.09	4	1128.17	10	1128.85	30	1129.08	21	1129.58	21	1128.52	77	1128.37	47	1128.21	24	1129.04	209	1128.17	20	1127.92	1
13	1127.96	11	1128.08	11	1128.14	8	1128.87	33	1129.08	21	1129.71	39	1128.50	73	1128.29	36	1128.17	20	1128.87	162	1128.08	11	1127.92	1
14	1128.08	19	1128.08	11	1128.39	36	1128.83	27	1129.08	21	1129.73	41	1128.50	73	1128.35	45	1128.62	99	1129.87	525	1128.08	11	1127.92	1
15	1128.08	19	1128.08	11	1128.42	40	1128.83	27	1129.23	27	1129.77	33	1128.50	73	1128.33	41	1128.56	86	1129.08	221	1128.08	11	1127.92	1
16	1128.08	19	1128.08	11	1128.46	31	1128.83	27	1129.27	33	1129.77	33	1128.50	73	1128.25	30	1128.44	60	1128.58	90	1128.10	13	1127.92	1
17	1128.08	19	1128.08	11	1128.50	37	1128.83	27	1129.17	20	1130.37	162	1128.46	65	1128.33	41	1128.33	41	1128.46	65	1128.02	6	1127.92	1
18	1128.00	13	1128.08	11	1128.46	31	1128.87	33	1129.25	30	1130.67	365	1128.50	73	1128.35	45	1128.25	30	1128.44	60	1128.02	6	1127.92	1
19	1128.12	23	1128.08	11	1128.50	37	1128.87	20	1129.27	33	1130.29	333	1128.46	65	1128.35	45	1128.35	45	1128.46	65	1128.00	4	1127.92	1
20	1128.46	67	1128.08	11	1128.67	67	1128.79	12	1129.23	27	1130.42	505	1128.42	56	1128.33	41	1128.31	39	1128.44	60	1128.00	4	1127.92	1
21	1128.42	60	1128.08	11	1128.67	47	1128.79	12	1129.21	24	1130.46	640	1128.42	56	1128.32	41	1128.21	24	1128.37	47	1128.00	4	1127.92	1
22	1128.35	50	1128 17	20	1128.50	23	1128.71	5	1129.33	41	1130.75	875	1128.83	151	1128.48	69	1128.21	24	1128.25	30	1128.00	4	1127.92	1
23	1128.33	47	1128.17	20	1128.50	23	1128.79	12	1129.37	47	1132.12	1420	1128.75	130	1129.25	280	1128.46	65	1128.29	36	1128.00	4	1127.92	1
24	1128.37	52	1128.27	33	1128.50	23	1128.87	20	1129.50	73	1132.52	1580	1128.67	111	1129.04	209	1128.42	56	1128.25	30	1128.00	4	1127.92	1
25	1128.37	52	1128.50	73	1128.50	23	1128.87	20	1129.46	65	1132.81	1700	1128.58	90	1128.79	141	1128.50	73	1128.19	22	1128.00	4	1127.92	1
26	1128.08	19	1128.42	56	1128.50	13	1128.83	16	1129.54	81	1132.37	1520	1128.54	81	1128.42	56	1128.75	130	1128.25	30	1128.00	4	1127.92	1
27	1128.08	19	1128.33	41	1128.50	13	1128.87	20	1129.56	86	1131.08	1010	1128.58	90	1128.35	43	1128.57	162	1128.00	4	1128.00	4	1127.92	1
28	1128.08	19	1128.17	20	1128.67	33	1128.92	26	1129.56	86	1130.04	595	1128.60	94	1128.35	45	1128.54	81	1128.08	11	1128.00	4	1127.92	1
29	1128.04	16	1128.25	30	1128.64	29	1128.92	26	.....	....	1129.50	377	1128.50	73	1128.35	45	1128.81	146	1128.08	11	1128.02	6	1127.92	1
30	1128.00	13	1128.42	56	1128.62	26	1128.92	26	.....	....	1129.29	293	1128.62	99	1128.27	33	1128.83	151	1128.04	8	1128.08	11	1127.92	1
31	1128.00	13	.....	....	1128.67	20	1129.02	40	.....	....	1129.52	385	.....	....	1128.25	30	.....	....	1128.25	30	1128.08	11	.....	....

Monthly Discharge of Speed River near Guelph for 1916-7

Drainage Area, 77 Square Miles

Month	Discharge in Second-feet			Discharge in Second-feet per Square Mile			Run-off
	Maximum	Minimum	Mean	Maximum	Minimum	Mean	Depth in Inches on Drainage Area
October. ..(1916)	67	8	21	.87	.10	.27	.31
November "	73	4	19	.95	.05	.25	.28
December "	67	8	27	.87	.10	.35	.40
January (1917)	46	5	26	.60	.07	.34	.39
February	86	20	39	1.12	.26	.51	.53
March	1,700	17	398	22.08	.22	5.17	5.96
April	635	56	152	8.25	.73	1.97	2.20
May	280	30	73	3.64	.39	.95	1.10
June	162	20	61	2.10	.26	.79	.88
July	775	4	135	10.07	.05	1.75	2.02
August	77	4	11	1.00	.05	.14	.16
September	11	1	3	.14	.01	.04	.04
The year	1,700	1	81	22.08	.01	1.05	14.29

Speed River at Hespeler

Location—At a point 100 feet below the jail, which adjoins the power house, in the Town of Hespeler, Township of Waterloo, County of Waterloo.

Records Available—Discharge measurements from July 10, 1913. Daily gauge heights from October 23, 1913.

Drainage Area—250 square miles.

Gauge—Vertical steel staff 0 to 12 feet on jail wall adjoining power house. The elevation of zero on the gauge is 935.00.

Channel and Control—Straight for about 300 feet above and below the gauging section. Loose gravel forms the bed of this stream, which is decidedly shifting. The banks are low, and overflow when the water raises 2 feet above normal. Weeds at the control and in channel have a decided effect at the gauging section.

Discharge Measurements—Made from a permanent wading section 100 feet below the gauge during the low stages, and the dam 400 feet above will be used as a weir during the flood season.

Winter Flow—The relation of gauge height to discharge is somewhat affected by the presence of ice for a short period during the winter season.

Regulation—A dam 400 ft. above this section causes serious fluctuations in the river stage during the low water period.

Accuracy—Owing to the shifting bed and the presence of weeds at and below section, greatly interfering with the metering of stream, these records can only be classed as fair.

Observer—W. D. Scott, Hespeler.

Discharge Measurements of Speed River at Hespeler in 1916-7

Date	Hydrographer	Width in Feet	Area of Section in Sq. Feet	Mean Velocity in Feet per Sec.	Gauge Height in Feet	Discharge in Sec-Feet	Discharge in Second-feet per Square Mile
1916							
Dec. 12....	Yeates, W	90	91	1.28	936.39	117	.....
1917							
Jan. 5....	"	90	88	1.35	936.38	119	.....
" 18....	"	90	101	.98	936.58	99 (a)	.....
Feb. 2....	"	85	90	1.06	936.50	96 (b)	.....
Mar. 5....	Roberts, E....	90	113	1.11	936.54	125 (c)	.....
" 29....	Yeates, W	123	356	4.19	938.89	1.490	.....
" 30....	"	123	270	3.93	938.17	1,062	.....
April 27....	Roberts, E....	95	163	2.00	937.04	325	.....
" 27....	"	100	163	2.23	937.10	363	.....
" 27....	"	123	143	2.55	937.10	363	.....
July 3....	Yeates, W	123	259	3.36	938.10	871	.....
" 27....	Roberts, E....	94	95	1.28	936.46	122	.....
Aug. 21....	Yeates, W....	93	70	.77	936.21	54	.....
Sept. 28....	"	94	85	1.12	936.44	95	.....
Oct. 26....	"	95	106	1.27	936.55	134	.....

(a) Ice measurement.
(b) Ice on pond below section probably affects reading.
(c) Ice on control.

Daily Gauge Height and Discharge of Speed River at Hespeler for 1916-7

Drainage Area, 250 Square Miles

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge	Gauge Ht.	Discharge
	Feet	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*	*Feet*	*Sec-ft.*
1	936.00	57	936.27	96	936.33	105	936.14	81	936.52	100	936.56	128	938.54	1230	937.06	339	936.73	204	938.62	1290	936.48	134	936.42	122
2	936.23	94	936.29	99	936.35	109	936.29	99	936.52	100	936.56	128	938.96	1540	937.08	348	936.71	197	939.25	1760	936.46	130	936.25	94
3	936.27	101	936.31	102	936.35	109	936.29	99	936.33	80	936.54	120	939.00	1570	937.06	339	936.71	197	938.27	1050	936.46	130	936.31	102
4	936.25	98	936.29	99	936.35	109	936.27	96	936.10	62	936.33	95	938.21	1010	937.14	378	936.73	204	937.56	600	936.46	130	936.44	126
5	936.25	98	936.17	85	936.31	102	936.29	99	936.31	78	936.44	102	938.17	980	937.12	368	936.73	204	937.42	525	936.14	81	936.46	130
6	936.23	94	936.29	99	936.33	105	936.29	98	936.46	96	935.92	60	938.37	1110	937.19	403	936.69	191	937.12	368	936.35	109	936.44	126
7	936.23	94	936.29	99	936.31	102	936.33	102	936.46	96	936.25	83	938.17	980	937.14	378	936.67	185	936.98	301	936.37	113	936.44	126
8	936.08	69	936.29	99	936.31	102	936.37	107	936.46	96	936.31	89	937.48	555	937.02	320	936.67	185	937.04	329	936.46	130	936.46	130
9	936.25	98	936.27	96	936.21	89	936.54	134	936.46	96	936.33	94	937.23	423	936.96	293	936.64	176	936.96	293	936.48	134	936.31	102
10	936.27	101	936.39	116	936.21	89	936.52	130	936.42	93	936.37	95	937.23	423	936.85	248	936.69	191	937.31	463	936.37	113	936.46	130
11	936.27	101	936.35	109	936.33	105	936.64	146	936.17	68	936.33	94	937.06	339	936.73	204	936.64	176	937.92	820	936.46	130	936.44	126
12	936.25	98	936.17	85	936.44	126	936.46	105	936.39	94	936.44	109	937.04	329	936.60	164	936.64	176	938.10	935	936.37	113	936.42	122
13	936.25	98	936.37	113	936.29	99	936.48	107	936.37	93	936.44	107	937.08	348	936.58	159	936.67	185	937.87	785	936.42	122	936.39	116
14	936.27	101	936.39	116	936.33	105	936.52	109	936.37	92	936.42	104	937.04	329	936.50	138	936.54	148	937.81	750	936.42	122	936.39	116
15	936.10	72	936.37	113	936.33	105	936.48	104	936.37	93	936.42	104	937.00	310	936.54	148	936.54	148	937.56	600	936.50	138	936.35	109
16	936.23	94	936.42	122	936.27	96	936.52	107	936.42	95	936.50	120	936.92	276	936.46	130	936.48	134	937.46	545	936.48	134	936.14	181
17	936.23	94	936.35	109	936.19	87	936.56	109	936.37	88	936.69	143	936.94	284	936.50	138	936.79	225	937.27	443	936.46	130	936.35	109
18	936.25	98	936.39	116	936.33	105	936.50	95	936.17	72	936.81	197	937.12	368	936.44	126	936.73	204	937.08	348	936.33	105	936.37	113
19	936.25	98	936.12	79	936.33	105	936.50	98	936.56	122	936.79	197	937.12	368	936.48	134	936.71	197	936.94	284	936.27	96	936.35	109
20	936.25	98	936.35	109	936.29	99	936.52	100	936.52	118	937.25	378	937.14	378	936.56	154	936.71	197	936.87	255	936.35	109	936.35	109
21	936.29	105	936.33	105	936.31	102	936.42	88	936.52	114	937.06	310	937.10	358	936.52	143	936.64	176	936.79	225	936.33	105	936.33	105
22	936.04	63	936.31	102	936.31	102	936.44	90	936.52	114	937.27	388	937.12	368	936.60	164	936.56	154	936.75	211	936.33	105	926.33	105
23	936.27	101	936.29	99	936.31	102	936.44	93	936.52	114	938.19	935	937.14	378	936.89	263	936.52	143	936.56	154	936.29	99	936.17	85
24	936.27	101	936.31	102	936.17	85	936.44	95	936.42	99	939.46	1915	937.10	358	937.69	679	936.67	185	936.54	148	936.33	105	936.35	109
25	936.27	101	936.42	122	936.14	81	936.48	96	936.31	86	939.87	2223	937.06	339	937.62	637	936.85	248	936.52	143	936.33	105	936.33	105
26	936.23	94	936.42	122	936.25	94	936.48	99	936.56	128	940.50	2695	937.08	348	937.67	667	937.14	378	936.58	159	936.21	89	936.31	102
27	936.27	101	936.37	113	936.25	94	936.33	79	936.58	132	940.94	3025	937.04	329	937.02	320	937.12	368	936.52	143	936.50	138	936.33	105
28	936.27	101	936.39	116	936.23	92	936.08	62	936.56	128	939.92	2260	937.04	329	936.79	225	937.17	393	936.48	134	936.52	143	936.31	102
29	936.14	78	936.42	122	936.25	94	936.46	94	.....	.....	939.02	1585	937.02	320	936.75	211	937.54	590	936.67	185	936.44	126	936.29	99
30	936.28	104	936.31	102	936.21	89	936.52	100	.....	.....	938.54	1233	937.06	339	936.75	211	938.75	1380	936.48	134	936.33	105	936.31	102
31	936.29	105	.....	.....	936.10	77	936.52	100	.....	.....	938.25	1033	.....	.....	936.77	219	.....	.....	936.48	134	936.39	116	.....	.....

Monthly Discharge of Speed River at Hespeler for 1916-7

Drainage Area, 250 Square Miles

Month	Discharge in Second-feet			Discharge in Second-feet per Square Mile			Run-off
	Maximum	Minimum	Mean	Maximum	Minimum	Mean	Depth in Inches on Drainage Area
October .. (1916)	105	57	94	.42	.23	.38	.44
November "	122	85	106	.49	.34	.42	.47
December "	126	81	99	.50	.32	.40	.46
January (1917)	146	62	101	.58	.25	.40	.46
February	132	62	98	.53	.25	.39	.41
March.....	3,025	60	650	12.10	.24	2.60	3.00
April	1,570	276	554	6.28	1.10	2.22	2.48
May.....	679	126	279	2.72	.50	1.12	1.29
June	1,380	134	258	5.52	.54	1.03	1.15
July.....	1,760	134	468	7.04	.54	1.87	2.16
August.....	143	81	117	.57	.32	.47	.54
September.....	130	81	111	.52	.32	.44	.49
The year	3,025	57	246	12.10	.23	.98	13.35

Miscellaneous Measurements

River	Location	Date	Discharge in Sec-ft.	
Blanche	Windago Lake	Jan. 22, 1917	203	(a)
Bonnechere	Golden Lake	Oct. 30, 1916	121	(b)
"	" "	Apr. 18, 1917	1,588	(b)
"	" "	Apr. 19, 1917	1,487	(b)
"	" "	May 8, 1917	1,500	
Manitou	Devil's Cascades	Aug. 25, 1917	183	
Sauble	Sauble Falls	Oct. 16, 1917	82	
"	" "	Nov. 10, 1917	166	
"	" "	Nov. 23, 1917	183	
Spanish	Espanola	Oct. 18, 1916	2,750	
"	"	Nov. 18, 1916	4,383	
"	"	Dec. 12, 1916	8,705	(c)
"	"	Jan. 10, 1917	3,451	(c)
Western Counties Canal	Brantford	June 9, 1917	379	
Winnipeg	Dalles Rapids	July 29, 1917	6,046	
"	White Dog Falls. N. Chan.	Aug. 2, 1917	205	
"	White Dog Falls, S. Chan.	Aug. 3, 1917	7,061	

(a) Ice measurement.
(b) Dam below section under construction.
(c) Section partly ice-covered.

1912-13

Table Showing Run-Off as % Precipitation

River	Locality	District	Precipitation Station	Inches Precip'n.	Inches Run-Off	%
Maitland	Ben Miller	South Western Ont.	Brucefield	40.03	27.83	69.2

1913-14

River	Locality	District	Precipitation Station	Inches Precip.n.	Inches Run-Off	%
Maitland	Ben Miller	South Western Ont.	Brucefield	34.18	13.32	38.4
Beaver	Eugenia	" "	Collingwood	19.97	10.37	51.8
Grand	Belwood	Grand River	Alton	28.13	6.17	21.6
"	Conestogo	"	Elora	56.55	6.33	12.0
"	Galt	"	"	56.55	6.27	11.1
"	Glen Morris	"	Paris	32.83	7.85	23.9
"	Brantford	"	"	32.83	7.87	23.9
"	York	"	"	32.83	8.06	36.2
Irvin	Salem	"	"	32.83	7.06	21.4
Conestogo	St. Jacob's	"	"	32.83	8.99	27.3
Speed	Caraher's	"	"	32.83	8.13	24.7
"	Hespeler	"	Guelph	26.30	7.65	29.1
Galt Creek	Galt	"	Elora	56.55	8.36	14.8
Nith	Canning	"	"	56.55	10.36	17.2
Whiteman's Creek	Burford	"	"	56.55	10.05	17.7
Fairchild's Creek	Onondaga	"	Alton	28.13	8.75	31.0
Boston Creek	York	"	Paris	32.83	11.98	36.4

1914-15

River	Locality	District	Precipitation Station	Inches Precip'n	Inches Run-Off	%
Blanche	Englehart	Northern Ontario	Rutherglen	27.14	12.91	47.7
South	Powassan	" "	"	27.14	13.12	48.4
Sturgeon	Smoky Falls	" "	"	27.14	13.90	51.3
Muskoka	Tretheway's	Eastern "	Beatrice	40.26	16.22	40.3
Eagle	Eagle River	N. Western "	Savanne	17.99	5.73	31.8
Footprint	Ry. Lake Falls	" "	"	17.99	7.48	41.6
Manitou	Devil's Cascades	" "	"	17.99	7.02	39.0
Turtle	Mt. Rapids	" "	"	17.99	7.09	39.4
Wabigoon	Quibell	" "	"	17.99	6.25	34.8
"	Wabigoon Falls	" "	"	17.99	6.09	33.8
Maitland	Ben Miller	S. Western "	Brucefield	34.22	14.87	43.6
Nottawasaga	Nicolston	" "	Alton	36.10	9.82	27.2
Saugeen	Port Elgin	" "	Southampton	32.94	11.90	36.1
"	Walkerton	" "	"	32.94	10.77	32.7
Thames	Byron	" "	London	40.58	12.33	30.3
Grand	Belwood	Grand River	Alton	36.10	12.45	34.4
"	Brantford	" "	"	36.10	11.00	30.5
"	Conestogo	" "	Elora	37.45	12.26	32.7
"	Galt	" "	"	37.45	9.56	25.5
"	York	" "	Alton	36.10	10.41	28.8
Boston Creek	"	" "	"	36.10	9.04	25.0
Conestogo	St. Jacob's	" "	"	36.10	15.62	43.3
Fairchild's Creek	Onondaga	" "	"	36.10	8.23	22.8
Galt Creek	Galt	" "	Elora	37.45	10.68	28.5
Irvin	Salem	" "	"	37.45	18.50	49.3
Nith	Canning	" "	"	30.46	12.53	41.2
Speed	Guelph	" "	Guelph	33.36	13.10	39.2
"	Hespeler	" "	"	33.36	10.43	31.3
Whiteman's Creek	Burford	" "	Elora	37.45	10.65	28.4

1915-16

River	Locality	District	Precipitation Station	Inches Precip'n	Inches Run-Off	%
aux Sables	Massey	Northern Ontario	Turbine	29.80	23.70	79.5
Blanche	Englehart	" "	Rutherglen	34.97	18.24	52.2
Frederickhouse	Frederickhouse	" "	"	34.97	24.24	69.3
Kagawong	Kagawong	" "	Gore Bay	21.25	11.02	51.8
Mississagi	Iron Bridge	" "	Turbine	29.80	17.70	59.4
South	Powassan	" "	Rutherglen	34.97	24.09	68.9
Spanish	Espanola	" "	Turbine	29.80	19.46	65.3
Sturgeon	Smoky Falls	" "	Sturgeon Falls	26.87	20.83	77.5
Vermilion	Whitefish	" "	Turbine	29.80	18.65	62.6
Wanapitei	Wanapitei	" "	"	29.80	17.58	59.0
Black	Washago	Eastern Ontario	Fenelon Falls	32.67	21.64	66.2
Bonnechere	Golden Lake	" "	Renfrew	33.97	13.88	40.9
Madawaska	Madawaska	" "	"	33.97	11.57	34.1
Maganetawan N.	Burk's Falls	" "	Emsdale	43.71	32.94	75.4
" " S.	" "	" "	"	43.71	27.36	62.8
Muskoka, N. Br.	Port Sydney	" "	Beatrice	43.33	21.95	50.7
" S. Br.	Tretheway's	" "	"	43.33	25.02	57.7
Mississippi	Ferguson's	" "	Westport	37.60	20.69	55.0
"	Galetta	" "	Almonte	38.92	14.97	38.5
"	Snow Road	" "	Westport	37.60	23.68	63.0
Moira	Foxboro'	" "	Renfrew	29.79	12.68	42.6
Seguin	Parry Sound	" "	Emsdale	43.71	28.99	66.3
Tay	Glen Tay	" "	Westport	37.60	18.78	49.9
York	Baneroft	" "	Queensboro'	30.59	17.29	56.2
Napanee	Napanee	" "	Westport	37.60	25.32	67.3
Petawawa	Petawawa	" "	Renfrew	29.79	12.68	42.6
Grand	Belwood	Grand River	Alton	34.77	18.38	52.9
"	Conestogo	" "	Elora	33.43	17.29	51.7
"	Galt	" "	"	33.43	14.29	42.7
"	Glen Morris	" "	Alton, Elora, Guelph	34.07	17.15	50.3
"	Brantford	" "	Alton, Elora Paris, Guelph	35.35	16.46	46.6
"	York	" "	Alton, Elora, Paris, Guelph	35.35	18.38	52.0
Speed	Guelph	" "	Guelph	34.02	19.33	56.8
"	Hespeler	" "	"	34.02	17.42	51.2
Nith	Canning	" "	Paris	37.19	20.69	55.6
Ausable	Arkona	S. W. Ontario	London	42.19	18.51	43.9
Beaver	Kimberley	" "	Markdale	35.82	19.33	54.0
Bighead	Meaford	" "	"	35.82	14.43	40.3
Credit	Cataract Jct.	" "	Alton	34.77	14.16	40.7
Maitland	Ben Miller	" "	Brucefield	41.62	22.32	53.6
Nottawasaga	Nicolston	" "	Alton	34.77	13.61	39.1
Rocky Saugeen	Markdale	" "	Markdale	35.82	20.01	55.9
Saugeen	Port Elgin	" "	Walkerton	39.91	23.14	58.0
"	Walkerton	" "	Brucefield	41.62	20.28	48.7
Sydenham	Owen Sound	" "	Markdale	35.82	18.92	52.8
Thames	Byron	" "	London	42.19	20.82	49.3
"	Ealing	" "	"	42.19	19.74	46.8
"	Fanshawe	" "	"	42.19	18.51	43.8
Eagle	Eagle R.	North W. Ontario	Kenora	24.41	11.16	45.7
English	Ear Falls	" "	Lac Seul	25.48	12.66	49.7
"	Manitou Falls	" "	"	25.48	11.43	44.8
"	Oak Falls	" "	"	25.48	11.57	45.4

1916-17

River	Locality	District	Precipitation Station	Inches Precip'n	Inches Run-Off	%
Black	Washago	Eastern Ont.	Fenelon Falls	32.01	19.1	59.7
Bonnechere	Renfrew	"	Clontarf	29.82	9.9	33.1
Madawaska	Claybank	"	"	29.82	10.7	35.7
"	Madawaska	"	Madawaska	38.70	11.2	28.8
Maganetawan, N.	Burk's Falls	"	Emsdale	36.65	31.8	86.9
" S.	"	"	"	36.65	27.8	75.8
Mississippi	Ferguson's	"	Westport	30.99	12.3	39.6
"	Galetta	"	Almonte	34.41	9.4	27.2
"	Snow Road	"	Westport	30.99	13.0	41.8
Moira	Foxboro'	"	Queensboro'	24.15	12.5	51.6
Muskoka	Port Sydney	"	Beatrice	42.83	23.9	55.9
"	Tretheway's	"	"	42.83	21.1	49.2
Napanee	Napanee	"	Westport	30.99	12.3	39.6
Petawawa	Petawawa	"	Pembroke	30.80	16.2	52.4
Seguin	Parry Sound	"	Emsdale	36.65	22.6	61.6
Tay	Glen Tay	"	Westport	30.99	8.5	27.5
York	Bancroft	"	Madawaska	38.70	13.5	34.8
aux Sables	Massey	Northern Ont.	Turbine	33.74	27.9	82.7
Blanche	Englehart	"	Haileybury	35.45	20.8	58.6
Frederickhouse	Frederickhouse	"	Wawiatan	37.29	30.1	80.6
Kagawong	Kagawong	"	Gore Bay	31.65	13.4	42.5
Mississagi	Iron Bridge	"	Turbine	33.74	19.1	56.7
South	Powassan	"	Rutherglen	37.66	26.6	70.7
Spanish	Webbwood	"	Turbine	33.74	19.8	58.6
Sturgeon	Smoky Falls	"	Sturgeon Falls	29.11	20.3	69.8
Wanapitei	McVittie's	"	Capreol	27.20	16.9	62.3
Eagle	Eagle River	Northwest'n Ont.	Kenora	19.37	6.6	34.1
English	Ear Falls	"	Lac Seul	19.53	6.6	33.9
"	Manitou	"	"	19.53	6.3	32.4
"	Oak Falls	"	"	19.53	6.4	32.7
Turtle	Mt. Rapids	"	Mine Centre	18.15	7.5	41.1
Seine	Skunk Rapids	"	"	18.15	6.2	34.1
Grand	Belwood	Grand R. B'n.	Alton	32.51	13.28	40.8
"	Conestogo	"	Elora	33.61	11.43	34.0
"	Galt	"	"	33.61	11.39	33.9
"	Glen Morris	"	Alton, Elora, Guelph	33.76	13.87	41.0
"	Brantford	"	Alton, Elora, Guelph	35.64	13.25	37.1
"	York	"	Alton, Elora, Paris	35.64	12.89	36.1
Speed	Guelph	"	Guelph	35.15	14.29	40.6
"	Hespeler	"	"	35.15	13.35	38.0
Nith	Canning	"	Paris	41.28	12.88	31.2
Ausable	Arkona	Southwest'n Ont.	Lucan	27.51	11.71	42.5
Beaver	Kimberley	"	Eugenia	40.93	18.30	44.7
Bighead	Meaford	"	Markdale	47.96	17.79	37.1
Credit	Cataract Jct.	"	Alton	32.51	10.22	31.4
Maitland	Ben Miller	"	Brucefield, Mt. Forest	40.77	20.06	49.2
Nottawasaga	Nicolston	"	Alton	32.51	9.76	30.0
Rocky Saugeen	Markdale	"	Markdale	47.96	18.66	38.9
Saugeen	Port Elgin	"	Walkerton	40.81	18.39	45.1
"	Walkerton	"	Mt. Forest	41.41	17.62	42.5
Sydenham	Owen Sound	"	Markdale	47.96	20.83	43.4
Thames	Byron	"	Woodstock, London, Stratford	39.08	15.22	39.0
"	Ealing	"	Woodstock	35.01	14.31	40.8
"	Fanshawe	"	Stratford	40.52	11.39	28.1

NORTHERN ONTARIO DISTRICT

Summary of Discharge

Summary of discharge in second-feet per square mile for regular river stations in the Northern Ontario District for which such data are available in this report.

Station	Drainage Area Sq. miles	1916			1917									
		Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Year
aux Sables River near Massey	524	1.40	2.43	2.73	.81	.32	.43	2.61	3.87	4.64	4.15	.73	.42	2.06
Blanche River near Englehart	430	.66	.82	.64	.62	.52	.38	1.53	7.85	2.18	1.65	.71	.81	1.53
Frederickhouse River at Frederickhouse	1,260	.35	1.71	3.25	3.55	1.02	.34	1.27	6.42	4.07	2.26	1.49	.74	2.22
Kagawong River at Kagawong	94	.28	.63	1.10	.93	.96	.70	1.74	1.61	1.46	1.24	.67	.56	.99
Mississagi River at Iron Bridge	3,565	1.07	1.91	1.68	.86	.40	.42	1.02	3.32	3.54	1.50	.75	.39	1.41
South River near Powassan	294	1.72	1.92	3.01	.68	.38	1.13	5.00	3.17	1.93	2.97	1.07	.48	1.96
Spanish River near Webbwood	4,340	.70	1.22	1.41	.81	.40	.49	2.23	2.65	4.06	1.86	.98	.67	1.46
Sturgeon River near Smoky Falls	2,570	.71	1.06	1.25	.80	.62	.67	2.12	3.65	2.86	2.10	1.15	.91	1.50
Vermilion River near Whitefish	1,580	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Wanapitei River at McVittie's	1,190	.67	.77	1.00	.56	.48	.25	1.47	2.54	2.97	2.20	1.15	.93	1.25

EASTERN ONTARIO DISTRICT

Summary of Discharge

Summary of discharge in second-feet per square mile for regular river stations in Eastern Ontario District for which such data are available in this report

Station	Drainage Area Sq. miles	1916			1917									
		Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Year.
Blaek River near Washago	585	.48	1.22	2.64	.82	.42	1.48	5.06	2.23	1.07	.83	.43	.16	1.41
Bonnechere River at Renfrew	910	.24	.23	.27	.38	.57	1.42	2.27	1.68	.70	.38	.28	.33	.73
Madawaska River at Claybank	3,210	.37	.63	.....	.....	.....	.....	3.22	2.32	1.42	.84	.44	.18	1.17
Madawaska River at Madawaska	800	.30	.49	.66	.33	.31	.49	2.72	1.88	1.12	.88	.44	.25	.82
Maganetawan River (North Branch) near Burk's Falls	107	2.10	2.64	3.74	.93	.84	.95	6.99	3.42	1.96	3.38	.76	.39	2.35
Maganetawan River (South Branch) near Burk's Falls	257	1.21	2.60	2.83	1.37	1.09	1.04	4.44	3.52	1.92	2.33	1.31	.79	2.05
Mississippi River at Ferguson's Falls	1,042	.36	.26	.21	.18	.49	.94	4.12	2.18	.87	.53	.41	.31	.90
Mississippi River at Galetta	1,456	.27	.22	.23	.22	.24	.78	3.03	1.58	.77	.44	.29	.21	.69
Mississippi River near Snow Road	446	.62	.33	.21	.24	.38	.85	3.20	2.52	1.04	.79	.70	.56	.96
Moira River near Foxboro'	1,038	.10	.15	.34	.32	.26	2.12	5.15	1.31	.74	.36	.12	.06	.92
Muskoka River (North Branch) near Port Sydney	560	.99	1.60	3.17	1.06	.35	.61	5.77	2.73	1.61	2.29	.62	.33	1.77
Muskoka River (South Branch) at Tretheway's Falls	668	.60	.77	1.92	1.57	.88	.66	3.47	2.99	2.34	1.82	.77	.52	1.53
Napanee River near Napanee	300	.16	.15	.15	.19	.21	2.42	5·49	.92	.64	.25	.15	.13	.90
Petawawa River near Petawawa	1,572	.46	.76	.78	.79	.61	.41	2.21	3.23	1.54	1.66	1.32	.43	1.19
Seguin River near Parry Sound	380	.99	2.50	1.81	.78	.18	.38	7.81	1.96	1.46	1.35	.46	.32	1.66
Tay River near Glen Tay	204	.36	.34	.24	.26	.34	1.39	1.37	.59	.63	.62	.80	.58	.63
York River near Bancroft	374	.44	.61	1.23	.64	.46	.89	2.99	2.09	.98	.59	.52	.45	.99

NORTH-WESTERN ONTARIO DISTRICT

Summary of Discharge

Summary of discharge in second-feet per square mile for regular river stations in the North-Western Ontario District for which such data are available in this report

Station	Drainage Area Sq. miles	1916			1917									
		Oct.	Nov,	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Year.
Eagle River at Eagle River	970	.75	.59	.54	.51	.46	.42	.39	.58	.47	.40	.41	.32	.49
English River at Ear Falls	11,700	.78	.64	.56	.50	.42	.36	.33	.35	.36	.39	.56	.60	.49
English River at Manitou Falls	14,600	.70	.60	.54	.49	.41	.35	.32	.34	.35	.38	.54	.58	.47
English River at Oak Falls	15,570	.71	.61	.54	.48	.41	.36	.33	.35	.36	.38	.53	.57	.47
Seine River at Skunk Rapids	2,300	.73	.53	.33	.27	.17	.13	.20	.50	.94	.68	.52	.45	.46
Turtle River at Mountain Rapids	1,760	.92	.64	.37	.28	.25	.27	.54	1.16	.63	.41	.43	.69	.55
Wabigoon River near Quibell	2,400	.....	.....	.....	.....	.....	.....	.....	.94	.44	.36	.41	.32	.50
Wabigoon River at Wabigoon Falls	3,120	.....	.....	.....	.....	.....	.....	.....	.82	.50	.41	.47	.35	.51

SOUTH-WESTERN ONTARIO DISTRICT

GRAND RIVER BASIN

Summary of Discharge

Summary of discharge in second-feet per square mile for regular river stations on Grand River and tributaries for which such data are available in this report

Station	Drainage Area Sq. miles	1916			1917									Year
		Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	
Grand River at Belwood	280	.03	.06	.36	.07	.05	4.71	3.20	.69	.41	1.99	.06	.01	.98
Grand River at Brantford	2,000	.25	.29	.33	.40	.32	3.27	2.16	.92	.89	2.41	.24	.15	.98
Grand River near Conestogo	550	.08	.10	.17	.11	.07	3.34	2.41	.72	.47	2.27	.17	.08	.84
Grand River at Galt	1,360	.17	.19	.25	.28	.22	3.31	1.94	.74	.67	1.83	.21	.15	.84
Grand River at Glen Morris	1,390	.33	.18	.44	.34	.21	3.89	2.28	.92	.77	2.46	.24	.14	1.02
Grand River at York	2,280	.24	.28	.46	.36	.22	3.10	2.09	.95	1.02	2.05	.33	.20	.95
Nith River near Canning	430	.29	.30	.51	.42	.26	2.93	1.60	1.12	1.04	2.23	.33	.27	.95
Speed River near Guelph	77	.27	.25	.35	.34	.51	5.17	1.97	.95	.79	1.75	.14	.04	1.05
Speed River at Hespeler	250	.38	.42	.40	.40	.39	2.60	2.22	1.12	1.03	1.87	.47	.44	.98

SOUTH-WESTERN ONTARIO DISTRICT

Summary of Discharge

Summary of discharge in second-feet per square mile for regular river stations in South-Western Ontario District for which such data are available in this report

Station	Drainage Area Sq. miles	1916			1917									
		Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Se pt.	Year.
Ausable River near Arkona	408	.09	.09	.18	.28	.17	3.27	1.88	1.56	.99	1.55	.13	.08	.86
Beaver River near Kimberley	100	.51	.88	1.56	1.09	1.13	1.61	2.90	1.89	1.30	1.58	.90	.82	1.35
Bighead River at Meaford	132	.48	.61	1.14	.77	.55	2.11	4.39	1.50	1.05	2.17	.51	.40	1.31
Credit River at Cataract Junction	85	.38	.41	.55	.75	.65	2.39	1.33	.56	.45	.87	.34	.29	.75
Maitland River at Ben Miller	950	.16	.29	.62	.71	.78	5.02	2.44	1.55	2.51	3.18	.25	.13	1.48
Nottawasaga River near Nicolston	416	.34	.45	.45	.40	.42	2.38	1.50	.65	.47	1.03	.25	.23	.72
Rocky Saugeen River near Markdale	96	.61	.72	1.29	.89	.72	1.40	3.47	1.82	1.65	2.27	.91	.70	1.38
Saugeen River near Port Elgin	1,565	.38	.58	1.22	.76	.37	3.18	3.41	1.47	1.22	2.63	.60	.36	1.35
Saugeen River near Walkerton	850	.39	.51	1.02	.68	.55	3.18	3.45	1.36	1.16	2.41	.49	.32	1.30
Sydenham River near Owen Sound	71	.38	.55	1.65	.66	.56	3.35	4.37	1.51	1.32	3.10	.54	.35	1.54
Thames River (Main Stream) near Byron	1,270	.16	.15	.54	.36	.05	4.13	2.16	1.69	1.68	2.10	.23	.11	1.12
Thames River (South Branch) near Ealing	515	.22	.22	.31	.49	.23	2.88	2.10	1.37	1.92	2.32	.32	.22	1.05
Thames River (North Branch) near Fanshawe	585	.05	.10	.23	.57	.13	3.62	1.67	.76	.81	1.88	.08	.06	.84

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